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: COUNCIL ON PHARMACY AND CHEMISTRY, PRESENT AND FUTURE *

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:e world war marked an epoch in the existence of Council on Pharmacy and Chemistry as it did in luman endeavors. The information and experi- which had been accumulated by the Council ng its thirteen years' existence was drawn on by our rnment, directly or indirectly, and it also received ideration in England, France,[2] Belgium, Holland,[3] Sweden and elsewhere. In the world wide justment that has begun, the efforts of the Council, and present, will influence the plans of those who ge in the manufacture or sale of medicines, and, oubtedly, will be the incentive to the establishment imilar bodies in other countries.

s secretary of the Council almost from the time of rganization in 1905,[4] and knowing the work of its ibers and its collaborators, I am firmly convinced this body has deserved the endorsement and sup- given it by the American medical profession. I come this opportunity to present an outline of the ncil's past activities and to speak of some of the problems of the future, because I feel assured that a knowledge of its endeavor to improve drug therapy will increase the profession's confidence in the Council and add to the number of its supporters.

THE COUNCIL'S ACTIVITIES

Organized primarily for the purpose of putting a stop to false declarations with regard to the composition of proprietary medicines, the Council's activities have broadened until its work may be characterized as "a propaganda for the rational use of drugs." The following are some of its activities:

1. *New and Nonofficial Remedies.*—This is an annual volume, issued by the Council. It describes both proprietary and unofficial nonproprietary drugs which are deemed worthy of consideration by the medical profession. To be admitted to this book, a preparation must comply with certain definite rules which stipulate, in effect, that its composition be declared, that no untrue or grossly exaggerated claims be made for it, and that it shall give promise of having therapeutic value.

With the exception of a few which are still under consideration, the Council has considered all proprietaries whose owners or accredited agents have requested that an examination of the products be made, and it has admitted to the book those which were found eligible. In addition, the Council has examined all of the more important or widely exploited proprietaries, even when no examination was requested, and it has admitted those of this group which were found eligible. Further, the Council has admitted to the book certain unofficial, nonproprietary articles which seemed to give promise of therapeutic usefulness, and it has established standards for the control of their identity and purity, and listed those brands which complied with these standards.

As most proprietary medicines are of a more or less experimental nature, they are accepted for inclusion in New and Nonofficial Remedies only for a limited time—usually a period of three years. At the expiration of the period of acceptance, each preparation is reexamined and retained only if the claims made for it and the present day knowledge of its value permit this action.

Since manufacturers give information only in regard to their own products, New and Nonofficial Remedies groups together articles of a similar character, and includes in each case a general discussion of the group for the purpose of comparison, not only with each other, but also with the established or pharmacopeial drugs which members of the group are intended to supplant.

In brief, New and Nonofficial Remedies is a book in which are described preparations that have been

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ead before the Chicago Medical Society, March 26, 1919.

"New and Nonofficial Remedies" in France, Foreign News, M. A. 71: 1331 (Oct. 19) 1918; 70: 1753 (June 8) 1918.

Nederl. Tijdschr. v. Geneesk. Oct. 5, 1918, p. 1201.

An Italian View of the Proprietary Evil, Foreign News, M. A. 71: 849 (Sept. 7) 1918; The Council on Pharmacy and istry and the Patriotic Medical League in Italy, ibid. 71: 918 14) 1918.

Although the Council on Pharmacy and Chemistry was estab- in 1905, it is likely that only a small percentage of physicians just what the Council is, or have any conception as to its personnel its ability to judge the available evidence for proprietary medica- The personnel has changed from time to time since 1905. At nt its membership is: C. L. Alsberg, A.M., M.D., chief of the u of Chemistry, U. S. Department of Agriculture, Washington, ; R. A. Hatcher, Ph.G., M.D., professor of pharmacology, Cornell ersity Medical College, New York City; A. W. Hewlett, M.D., ssor of medicine, Leland Stanford Junior University Medical ol, San Francisco; John Howland, M.D., professor of pediatrics, s Hopkins University Department of Medicine, Baltimore; Reid , M.D., professor of pharmacology, Harvard University Medical ol, Boston; Henry Kraemer, Ph.D., professor of pharmacognosy, ersity of Michigan College of Pharmacy, Ann Arbor, Mich.; W. T. ope, A.B., M.D., Bard Professor of the Practice of Medicine, ge of Physicians and Surgeons of Columbia University, New York ; G. W. McCoy, M.D., director of the Hygienic Laboratory, United s Public Health Service, Washington, D. C.; Lafayette B. Mendel, , Sc.D., professor of physiologic chemistry, Sheffield Scientific ol, Yale University, New Haven, Conn.; F. G. Novy, M.D., professor of bacteriology, University of Michigan, Ann Arbor, ; W. W. Palmer, B.S., M.D., associate professor of medicine, ge of Physicians and Surgeons of Columbia University, New York ; L. G. Rowntree, M.D., professor of medicine, University of esota Medical School, Minneapolis; Torald Sollmann, M.D., pro- r of pharmacology and materia medica, Medical Department, Western Reserve University, Cleveland; Julius Stieglitz, Ph.D., Sc.D., .D., vice chairman of the Council, professor of chemistry, University of Chicago, Chicago; G. H. Simmons, M.D., LL.D., chairman of the ncil, editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Chicago, and W. A. Puckner, Phar.D., secretary of the Council, tor of the Chemical Laboratory of the American Medical Association, Chicago.

accepted by the Council. The description includes facts that the physician should have. It is a book that should be in the hands of every physician who prescribes medicines, and who wishes to know the facts regarding the newest remedies. It is the only book in which he can find information relative to proprietary medicines that are worthy of his patronage. It will protect the physician who makes use of it against the wiles of the promoters of products not worthy of his patronage. It would certainly be of use to the physician when the detail man calls on him, for if he were being importuned to prescribe or use samples of something which he had not heretofore used and which he was unable to find in N. N. R., he might ask the detail man why. In the nature of things few physicians are sufficiently expert in chemistry and allied sciences to be able unerringly to discriminate between the true and the false as regards many preparations that he is asked to prescribe.

2. *The Reports of the Council on Pharmacy and Chemistry.*—A medicament may be inadmissible to New and Nonofficial Remedies for various reasons; it may be worthless or irrational, its composition may be secret or indefinite, or it may be exploited under exaggerated or unwarranted claims or in a way otherwise detrimental to the public health and scientific medicine. Of these various reasons which make an article unacceptable, the manufacturer obviously may remove all except the first, viz., worthlessness or irrationality. Consequently, a preparation which has been presented for admission is not definitely rejected until after its proprietor has been informed of the objections to his product and has failed to bring the preparation in conformity with the Council's rules. When a preparation is found definitely inadmissible to New and Nonofficial Remedies, that is, when the proprietor cannot or will not make it acceptable, the Council prepares a report for publication. These reports are sent for publication to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, and later published in the "Annual Reports of the Council on Pharmacy and Chemistry." The more important of these are also published in the book, "The Propaganda for Reform in Proprietary Medicines."

3. *Useful Drugs.*—Since the domination of proprietary medicines, which was retarding medical advance and threatening therapeutic chaos, had been made possible only by the insufficient and inefficient instruction given in medical schools in subjects having to do with drugs, the Council appointed a "Committee on Medical Teaching" to secure the cooperation of teachers in materia medica, pharmacology and related branches. This committee has endeavored to effect an improvement in these courses of instruction. One of the results of this work was the selection of a list of drugs to serve as a basis of materia medica instruction and thus insure that medical students shall be better informed with regard to the therapeutic worth of a few well established drugs, rather than, as in the past, leaving school with a smattering of knowledge about many drugs. The outcome of these efforts is the publication of "Useful Drugs," a concise but thorough and up-to-date discussion of the actions, uses and dosage of the more important drugs. The list of drugs presented in this book is now the basis of instruction in many schools; and many state examining boards are confining their materia medica questions to the drugs in the list.

4. *Epitome of the U. S. P. and N. F.*—To encourage the use of official drugs and to make available an estimate of their therapeutic value, a committee of the Council prepared an abstract of the U. S. Pharmacopeia and the National Formulary. This booklet, the "Epitome of the U. S. Pharmacopeia and National Formulary," presents those portions of these books which are of interest to physicians, and in addition, gives a concise statement of the therapeutic usefulness of the drugs and preparations described in them.

5. *Patent Law Reform.*—Some of the worst abuses connected with the exploitation of proprietary medicines have been made possible by our patent and trademark laws and the method of their interpretation and enforcement. The Council therefore appointed a committee to study these laws and the various propositions advanced for their improvement. This committee has published, from time to time, reports on various phases of our patent and trademark laws and recently summarized these reports in an address[5] sent to the commissioner of patents and the interested congressional committees. It is hoped that by means of these reports physicians will be enabled to give intelligent support to a revision of the patent and trademark laws when legislation is proposed.

6. *Therapeutic Research.*—Through its Committee on Therapeutic Research, and with the aid of funds provided by the Board of Trustees of the American Medical Association, the Council has encouraged the investigations of questions which might lead to a better understanding of the action of drugs. These investigations are brought together in the annual reports of the Therapeutic Research Committee of the Council, and are an important addition to our knowledge of drug action.

In the past, the Council has in particular encouraged the investigation of the action and therapeutic value of widely used drugs regarding which our knowledge is still unsatisfactory. These investigations have included a study of the action of strychnin in cardiac disease, a comparison of the action of absorption and excretion of iodid preparations, a study of the pharmacology of the opium alkaloids, etc. Appreciating that the available knowledge of proprietary drugs is one sided in that it comes from investigations made by interested pharmaceutical concerns or from investigations made at the instigation of these firms, the Council is planning a comprehensive study of many of the synthetic drugs that have gained some vogue during recent years.

THE FUTURE

Medical research, and efficient instruction in therapeutics and related subjects, spell a diminishing influence of commercial medicine over rational therapeutics. The fact that the present shortage of German synthetics has not handicapped seriously the practice of medicine should be a lesson to American physicians for many years to come.

On the other hand, it must be remembered that the publicity given to the reports of the Council and to other contributions toward rational therapeutics by THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, the journals of the state organizations, and a few personally owned publications, is as nothing when compared with the persistent and wide publicity given to the propaganda of the proprietary houses. While a report setting forth the objections to a proprietary is published but once, the firm's laudatory pronouncement goes forth again and again until the Council's report is completely overwhelmed and forgotten. Not only do manufacturers of proprietaries keep in close touch with the practicing physician by means of house organs, special "literature," or by traveling representatives, but many of the firms, through the meritorious lines of pills, tablets, tinctures, etc., which they put out, obtain and hold the good will and confidence of a large proportion of the medical profession.

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[5] Need for Patent Law Revision, A. M. A. Council on Pharmacy and Chemistry Reports, 1917, p. 130.

Furthermore, some of these firms not only gain the confidence of the medical profession through these high grade pharmaceuticals, but certain of their proprietaries may be of distinct therapeutic value and yet fail to be acceptable for New and Nonofficial Remedies, because they do not conform with the reasonable rules of the Council. These firms do not find it profitable to force the sale of their regular nonproprietary pharmaceuticals by unwarranted claims or objectionable methods, yet they may consider it good business to market certain proprietary products by means of claims which are extravagant and without warrant, and which will lead to indiscriminate use by the profession and the public. In a word, where there is one dollar spent on behalf of rational medicine, thousands are spent for the purpose of increasing the sale of preparations which directly or indirectly are a detriment to the public health, to medicine, and to the pocketbook.

That the day of the secret nostrum of the pseudochemical company is not yet past is well illustrated by the recent introduction of an asserted arsphenamin preparation called "Syphilodol." The A. M. A. Chemical Laboratory proved one form of this asserted French discovery to be essentially a pill of mercurous iodid. Another form of syphilodol (for intravenous administration) had all the characteristics of water, and appeared devoid of any potent ingredient. Though the advertising sent out by the promoters in regard to its composition was suspiciously evasive, the *Illinois Medical Journal* published an advertisement of "Syphilodol," which, possibly by a coincidence, appeared above an appeal to "Our Readers" to use wares advertised in that journal.

While such rank deceptions as "Syphilodol" are not common, there are more subtle deceptions that are even more dangerous. Types of widely exploited remedies of today comprise so-called ethical specialties composed of well known and established drugs (with "jokers" hidden away somewhere) or preparations which have a plausibly fascinating pseudo-scientific background of radiant energy, colloidal chemistry, nonspecific protein reaction, or something of the sort. The latter class of preparations in particular appeal to physicians who are striving hard to keep pace with modern science. Exposure of their fallacies requires most careful consideration on the part of the Council.

Progress toward a rational and scientific drug therapy must continue, and, therefore, it is important that the Council on Pharmacy and Chemistry should continue to make the investigation of proprietary medicines its chief work. Investigation of a proprietary medicine, however, and a report of such investigation are of value in direct ratio only to the number of physicians who read the report, endorse it and act in accordance with its conclusions. In order that you may determine to what extent those preparations which are admitted to New and Nonofficial Remedies deserve your interest and confidence, it will be worth while briefly to outline the rules which govern the Council in the admission of articles to New and Nonofficial Remedies.

RULES GOVERNING THE ACCEPTANCE OF ARTICLES FOR N. N. R.

Composition.—Rules 1 and 2, and in a measure 5, 7, and 9, deal with the composition of articles. Rule 1 requires that the quantitative composition of an article be furnished the Council for publication. Rule 2 requires that the manufacturer furnish methods whereby the composition of products that are definite chemicals or the potent constituents of mixtures may be determined. The Council does not require that the process of manufacture of an article be declared unless this becomes necessary in order to judge its composition. Rule 5 requires that statements with regard to the origin and source of an article shall be truthful. Rule 7 requires that for the guidance of the dispenser, the amounts of poisonous ingredients of a preparation be placed on the label. Rule 9 requires that if patent rights are claimed for a product, the Council be informed on this point.

That it is not only the right but also the duty of the physician to know the composition of what he prescribes for his patients is so generally admitted that few have attempted to market preparations of avowedly secret composition. When the Council first began its work, it was common to see chemical formulas or statements of composition published which a chemist or a pharmacist was able to pronounce at a glance as impossible.[6] It was not unusual to find that the promoter published "a formula" for his preparation, rather than "the formula."[7] Today, however, a more prudent, if not more honest, course is pursued. This gives a "formula" which is correct so far as it goes, but which fails to divulge the actual composition of a preparation. When it is considered that many physicians are not any too conversant with the chemistry and pharmacy of drugs, it is not surprising that some administered the proprietary "Venarsen," regarding the composition of which they had only the vague statement that it was ". . . a comparatively nontoxic organic arsenic compound, 0.6 gm. representing 247 mg. (3¾ grains) of metallic arsenic in chemical combination . . ." in the belief that a preparation similar to that first introduced as salvarsan was being used. That "Venarsen" contained its arsenic as sodium cacodylate—a notoriously inactive state of combination—does not justify the intravenous administration of a drug of unknown composition.

While for the present it probably is not feasible to require, on the part of those who manufacture medicinal preparations, such professional training as is required of those who prescribe and those who dispense them, it certainly is not too much to require, as does Rule 2, that a manufacturer shall be able to demonstrate that his preparation has the composition claimed for it. Nor is it sufficient for him to know that the ingredients claimed as constituents were used in the manufacture. The fallacy of this method of reasoning was furnished by the physician who reported that he had personally added the required amount of mercuric iodid for a batch of "Mercol" which, never-opening of the common duct in all patients with gallstones is not justifiable; yet I am convinced that unless this is done, a certain number of common duct stones will be overlooked and remain to cause subsequent symptoms. All of us can recall cases in which none of the classical symptoms of common duct stone were present, and yet operation revealed the presence of one or many calculi in that location.

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[6] Puckner, W. A.: The Abuse of Chemical Formulas, Reports A. M. A. Chemical Laboratory 3: 7, 1910.

[7] The Formula for Glyco-Thymoline, J. A. M. A. 52: 147 (Jan. 9) 1909.

In view of the reported simplicity of the operation and, according to the literature, the ease and certainty with which a choledochotomy enables us to drag all common duct calculi from their lurking places, it is with some humiliation that I confess that I have, apparently, failed to detect common duct calculi in certain cases, even after opening the duct. Of our fourteen instances of secondary operation in which common duct calculi were detected, in five of the patients, stone or stones had previously been removed from the duct. Again, it may be asserted that these are instances of reformation or descent of calculi; but I am inclined to think that in some cases, at least, the stones were present at the time the duct was first opened, but were overlooked.

To summarize, it appears that:

1. Stones are present in the common duct in a considerable number of patients suffering from cholelithiasis.

2. A certain number of patients with stone in the common duct do not present symptoms sufficiently suggestive to justify exploration of the duct, and in some of these cases, palpation will fail to disclose the presence of the stone.

3. Even exploration of the duct sometimes fails to reveal the presence of calculi, though the previous and subsequent history of these patients may indicate or prove that stones were actually present.

The mortality in common duct cases subjected to operation is variously given at from 6 to 16 per cent. In our series, five patients died, giving a mortality of 10 per cent. In the series of gallbladder cases, exclusive of those showing calculi in the common duct, the mortality was about 2 per cent. Hence it is evident that the operative risk is more than fourfold as great in gallbladder cases. The obvious lesson is that in cholelithiasis cases operation should be performed early before the entrance or formation of the calculus in the common duct, and we are again reminded that cholelithiasis is essentially a surgical problem, and that medical temporizing is fraught with peril to the patients.

REPORT OF CASES

Case 1.—A white man, aged 42, gave a history of having suffered from pain in the epigastrium for several years. Five weeks before his admission to the hospital he had a severe attack of pain in the right hypochondrium followed by jaundice. The jaundice had steadily increased and was as intense as that following cancer of the head of the pancreas. Abdominal examination disclosed a large, smooth tumor in the region of the gallbladder. Operation revealed a large, distended gallbladder containing bile and some blood. Bleeding was profuse from the skin wound, abdominal wound and through the tube from the gallbladder. We were unable to control hemorrhage, and the patient died forty-eight hours afterward. Postmortem examination revealed three large gallstones packed one on the other in the pelvis of the gallbladder and cystic duct, the lower one partly extruding from the cystic duct and completely blocking the common duct.

In the light of the postmortem findings, I feel satisfied that if this patient had been operated on a few days after the onset of his symptoms, he might have been saved. The mechanical block was so great that it never could have been overcome by nature.

Case 2.—A white woman, aged 42, had suffered previous attacks of pain in the epigastrium, with slight jaundice. The present illness commenced four weeks before admission to hospital with an attack of pain, jaundice, chills and fever. On admission, jaundice still persisted. Operation was delayed a few days in the hope of improvement in the patient's condition, but as none occurred, operation was advised. A high right rectus incision revealed a gangrenous perforated gallbladder with pericholecystic adhesions. The gallbladder was enlarged to the size of a small grapefruit, and was buried in adhesions. There was free fluid in the abdomen, and as soon as the adhesions were partly released, pus and bile-stained fluid began to well up, and a perforation on the under side of the gallbladder was located. A large amount of pus and a number of stones were removed from the gallbladder. Stones were palpated in the common duct; but the general condition of the patient was so bad, and bleeding was so free where adhesions were released, that it was found impracticable to remove stones from the common duct. Free drainage was instituted in the gallbladder and neighboring region. The patient died seven days later from hemorrhage and exhaustion.

Case 3.—A white woman, aged 35, gave a history of having repeated attacks of epigastric pain and tenderness in the right hypochondrium. Three weeks before admission to the hospital she had a violent attack of epigastric pain, followed by a chill, temperature and jaundice. Abdominal examination on admission revealed a mass in the right hypochondrium, with jaundice, increased leukocytes and rise of temperature. A diagnosis of empyema of the gallblader was made and operation advised. Through a right rectus incision the gallbladder was exposed and found to be buried in a mass of omental adhesions. It was opened and found to contain pus and stones. We were unable to palpate anything in the common duct, although the head of the pancreas was markedly enlarged. The patient made an uneventful recovery with the exception of a persistent biliary fistula. Every time this fistula closed it would be followed by mild attacks of epigastric pain, jaundice and fever. We made the diagnosis of stone in the common duct and advised another operation six months later. At the second operation a stone could be palpated in the common duct under the head of the pancreas. A retroduodenal operation was done, the common duct rotated, and the stone excised from the back. Stitches were put in the duct and a small rubber drain put in the retroperitoneal space. As this patient already had a biliary fistula, we did not feel that a tube in the common duct was necessary. For two days following operation there was increased jaundice and a failure to discharge bile through the fistula. The patient began to have hemorrhage from the mucous membrane and fistula, and died four days later.

Case 4.—A white woman, aged 65, had been suffering with digestive disturbances, pain in the epigastrium, and tenderness over the right hypochondrium for several years, and had jaundice with some of her attacks. Five weeks before admission to the hospital she was seized with severe colicky pain, chill, fever and jaundice. On admission her general condition was bad and jaundice severe. A diagnosis of cholelithiasis with stone in the common duct was made. We thought it best to delay operation, hoping that the jaundice would improve. Two days after admission to the hospital she had nosebleed. As her condition did not improve, one week after admission we operated on her, removing stones from the common duct and gallbladder and draining the common duct. For a few days she improved; then there occurred oozing through the drainage tube and gauze drainage in the cavity. This oozing continued off and on for about three weeks until the patient finally died from hemorrhage and exhaustion.

Case 5.—A white woman, aged 40 years, was brought to the hospital two weeks after a severe epigastric pain, jaundice, chills and fever. Because of the intense jaundice we thought it was best to postpone operation. She was kept in the hospital on continuous saline for six weeks, and the jaundice slowly disappeared. Three months after this attack I advised operation, although the patient was not clear of jaundice; but because of slight recurrence of symptoms I feared a complete obstruction. On operation a stone was found in the gallbladder, and one at the head of the pancreas; the latter was easily pushed back into the common duct above the duodenum. The duct was opened and the stone removed. There was a tendency to hemorrhage in the common duct. For some reason the duct did not drain for the first twenty-four hours, and then bile appeared through the tube and drain. Jaundice rapidly increased after the operation, and the patient began to have hemorrhage from the stomach and mucous membrane. She died thirty hours later.

COMMENT

From the histories of our five fatal common duct cases, it is seen that hemorrhage was the striking feature of all. Bleeding was the direct or strongly contributory cause of death in every instance. It is also apparent that the most rapidly fatal hemorrhage occurs in those patients in whom, for some cause, an acute exacerbation is superimposed on a chronic jaundice.

It has come to be universally recognized that delay and expectant treatment are indicated in some types of abdominal infection, but I am more and more inclined to believe that this rule cannot be followed with safety in cases of infection with obstruction of the common duct. Acute jaundice is not so potent a factor in producing the hemorrhagic diathesis as chronic jaundice is;[7] therefore, hereafter, in common duct cases, the appearance of jaundice will be an important factor in my decision for immediate operation.

PNEUMOCOCCUS MENINGITIS

TREATMENT BY A SPECIFIC ANTIPNEUMOCOCCUS SERUM

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In 1917 I reported that out of 134 cases of pneumonia diagnosed by myself and colleagues in western Pennsylvania during the preceding eighteen months, there had been fourteen cases of pneumococcus meningitis, several of which, being Type I, were treated by the intravenous and intraspinal use of the antipneumococcus serum of the Rockefeller Institute, with very interesting results but without any recoveries.[1] Since that time I have become more and more convinced that pneumococcus meningitis occurs much more frequently than has been supposed and far more frequently than it is recognized. Liebermeister has stated that in 25 per cent. of the cases of pneumonia there is a distinct suppurative inflammation in the membranes of the spinal cord, even though their gross appearance be unchanged.[2]

Evidence of meningeal irritation is often observed during the course of a pneumococcus infection, and these phenomena are too often treated as unimportant —as mere incidents of the general toxemia or as meningismus. But there are no signs or symptoms by which these warnings can be set aside as due merely to a so-called meningismus, by which is meant that there is no actual pathologic condition of the meninges; nor can a positive diagnosis of meningitis be made from the clinical signs and symptoms alone. A lumbar puncture should be made, with microscopic and cultural examination of the fluid obtained, in all cases which present a suspicion of meningeal irritation, and the eye grounds should be examined daily for evidence of choked disk. Lumbar puncture should be done and the eye grounds examined also in all cases of coma in which meningitis is possible, as in coma developing during a pneumonia, empyema, otitis media or sinusitis, for the reason that signs of meningeal irritation, such as abnormal or exaggerated reflexes, disappear if the coma is sufficiently profound. In rare cases, even after all these methods have been employed, we may still be in doubt. Clear, normal cerebrospinal fluid may be obtained by lumbar puncture although there is purulent inflammation of the meninges localized at higher levels. However, it is the rarest exception for cases showing signs and symptoms of meningeal irritation not to present positive laboratory findings on lumbar puncture.

Pneumococcus meningitis may develop during the course of lobar pneumonia or bronchopneumonia. It may develop after the usual onset suggestive of a pneumonia without the development at any time of any definite signs of pulmonary consolidation. Or, the meningitis may develop during convalescence from pulmonary pneumococcus infection and run a subacute course of several weeks' duration before the usual fatal termination. Meningitis may develop by extension from a pneumococcus infection of the frontal, sphenoid, or mastoid sinuses or even directly from the middle ear. Cases of recovery from proved pneumococcus meningitis have occurred very rarely. This is borne out by the following citations:

Elsner: We have no record of recovery in which the diagnosis of pneumococcus meningitis was positively established.[3]

Councilman: Where the pneumococcus or streptococcus was found, none of these cases recovered.[4]

Osler: All of our patients die.[5] The meningitis of pneumonia is almost always fatal.[6]

Stevens: Meningitis due to pneumococcal infection may be primary or associated with pneumococcal infection elsewhere. Symptoms are severe and the result fatal.[7]

Latham and Torrens: Meningitis in the course of a pneumonic septicemia is rapidly fatal.[8]

Lloyd: The prognosis is unfavorable.[9]

Pye-Smith and Beddard: Meningitis as a complication of lobar pneumonia is usually purulent and uniformly fatal.[10]

Bovaird: Such complications as meningitis . . . are always fatal.[11]

Delafield: Pneumonia-acute meningitis is a very infrequent complication but a very fatal one.[12]

Hall: Pneumococcic meningitis is practically always fatal.[13]

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[1] Litchfield, Lawrence, in discussion on Cole, Rufus: Report of Studies Concerning Acute Lobar Pneumonia, J. A. M. A. **69**: 505 (Aug. 18) 1917.

[2] Jores: The Common Diseases, Their Causes and Effects, translated by Weglom, Philadelphia, J. B. Lippincott Company, 1915, p. 146.

[3] Elsner: Monographic Medicine, New York, D. Appleton & Co., **6**: 159, 1916.

[4] Councilman: Handbook of Medical Science, 1904.

[5] Osler: The Principles and Practice of Medicine, Ed. 8, New York, D. Appleton & Co., 1912, p. 90.

[6] Osler: The Principles and Practice of Medicine, p. 97.

[7] Stevens: Medical Diagnosis, London, H. K. Lewis & Co., 1910, p. 1411.

[8] Latham and Torrens: Medical Diagnosis, New York, the Macmillan Company, 1915, p. 50.

[9] Lloyd: Sajous Analytic Cyclopedia, Philadelphia, F. A. Davis Co. **6**: 597, 1914.

[10] Pye-Smith and Beddard: System of Medicine, Allbutt and Rolleston, New York, the Macmillan Company **5**: 288, 1909.

[11] Bovaird: Internal Medicine, Philadelphia, J. B. Lippincott Company, 1912, p. 26.

[12] Francis Delafield, in Pepper: Theory and Practice of Medicine, Philadelphia, W. B. Saunders Company **2**: 552, 1894.

[13] Hall: Borderline Diseases, New York, D. Appleton & Co. **1**: 442, 1915.

Babcock: Meningitis is a very serious complication of pneumonia and usually proves fatal in from two to four days."

Whatever may be the route by which the lungs are invaded in pneumococcus infection, whether by extension through the bronchial tree or by distribution from the blood stream, a blood stream invasion with a widespread distribution of the pneumococci throughout the body is the rule very early in the disease. This being the case, it only remains for certain local conditions, as yet unknown, to be favorable, and there develops a suppurative meningitis, mediastinitis, pleuritis, peritonitis, arthritis, bursitis, otitis, myositis, mastoiditis, thrombophlebitis, sinsusitis, conjunctivitis or other complications.

During the fulminant onset of the epidemic of pneumonia at Camp Grant in the fall of 1918, the necropsies of Captain Hirsch furnished abundant evidence for the conception of pneumococcus infection just given, the presence of pneumococci in the cerebrospinal fluid being repeatedly demonstrated when there was no clinical or histologic evidence of meningitis. We cannot say that these patients would have developed pneumococcus meningitis if they had lived long enough, but we know that at least one prerequisite was present. In my opinion the presence of pneumococci in the cerebrospinal fluid is an indication for the intraspinal use of a bactericidal antipneumococcus serum such as the Kyes serum; but the presence of bacteria alone, without evidence in the cerebrospinal fluid of an inflammatory process, even though accompanied by signs and symptoms of meningeal irritation, does not prove that there is or ever will be a meningitis, although it makes such a development highly probable.

The results obtained by Capps at the Cook County Hospital during the winter of 1916-1917,[15] and at the base hospital at Camp Grant during the winter of 1917-1918 in the treatment of pneumonia with the antipneumococcus serum of Dr. Preston Kyes, made me very anxious to try this serum in cases of pneumococcus meningitis. Through the courtesy of the University of Chicago and the enthusiastic cooperation of Dr. Kyes, an abundance of serum was placed at my disposal; the recent epidemic furnished the cases.

The epidemic of influenza, so called, began at Camp Grant, September 19. In three or four days the victims of influenza began to develop pneumonia. October 11, my morning report showed 1,508 cases of pneumonia in the hospital. During the eight weeks we had over 10,000 cases of influenza with about 2,700 cases of pneumonia. The medical officers were asked to report [illegible]ce any cases show[illegible] signs of meningeal irritati[illegible] a month a[illegible] onset of the epidemi[illegible] [illegible]tis began to [illegible] rtion to [illegible] smaller [illegible] ber of [illegible] appear- [illegible] ance of [illegible] many [illegible] time to [illegible] ops very [illegible] and in this [illegible] the virulence [illegible] be diminished.

We had the opportunity of treating ten cases of typical pneumococcus meningitis with the Kyes serum. The clinical diagnoses in all of these cases were verified by consultants, and the etiology was established in each case by abundant laboratory findings. Of the ten patients, five died and five recovered. As far as the meningitis was concerned, there was no difference clinically between the condition of the patients who recovered and the condition of those that died. Some of the patients with the most intense symptoms of meningitis recovered. Some of the milder cases ended fatally owing to extensive involvement of other organs, as shown by necropsies. The treatment was the same in all cases.

REPORT OF CASES

For the sake of brevity only the briefs of the successful cases are here given:

CASE 1.—P. O., aged 24, colored, whose occupation was that of laborer, admitted to the hospital Oct. 3, 1918, had had measles, mumps, malaria, pneumonia and typhoid fever—all in childhood. On examination there were restricted breath sounds in the left lower lobe and a few râles. The abdomen was flat; the liver had no enlargement; the spleen was negative, the reflexes were negative, and the nervous and osseous systems were negative.

The present trouble began three days before admission to the hospital, with chills and fever, pain in the back, sore throat, headache, constipation and violent paroxysms of coughing.

Lobar pneumonia was diagnosed, October 15, in the right lower lobe. There was no herpes.

October 22, the condition was good. There was still some consolidation in the right lower lobe with fine râles.

October 27, the patient complained of pain in the chest and the lumbar region. The temperature rose to 103; the pulse was 88 with signs and symptoms of meningitis.

October 28, 10 c.c. of spinal fluid were withdrawn and 10 c.c. of Kyes serum were given intraspinally. The spinal fluid was clear; the white cell count was 720 per cubic millimeter. Sugar and globulin were negative. Direct smear and culture were negative. Blood count revealed 28,800 leukocytes.

October 29, the spinal fluid showed a white cell count of 1,810 per cubic millimeter. Globulin and sugar test were negative. Direct smear disclosed a few organisms, morphologically pneumococcus. Culture revealed a pneumococcus.

Kyes serum was given daily intravenously and intraspinally from October 28 to November 24.

October 31, the patient still had opisthotonos, ankle clonus, Babinski reflex and fixed pupils.

November 26, his condition was practically normal, without evidence of any sequelae.

December 1, his eye grounds and reflexes were all normal except for rather marked general cutaneous hyperesthesia.

CASE 2.—E. B., aged 22, colored, whose occupation was that of farmer, was admitted to the hospital Oct. 11, 1918. The family history was good. The patient had had measles, whooping cough, malaria and pneumonia in childhood. The present illness began October 10, with a severe headache, chills and fever. The following day herpes developed on the lips.

October 16, signs and symptoms of meningitis were confirmed by spinal puncture. Kyes serum was given intraspinally and intravenously, from 5 to 10 c.c. at a dose. There was a septic type of temperature, ranging from 101 to 104; then from 97 to 103, gradually reaching normal about November [illegible] The pulse varied between 85 and 100 until October 20, after which time it ranged between 60 and 85; after November 1 it was practically normal. October 21, the Kernig sign and the Babinski reflex were present and there was rigidity of the neck. October 22, there was a severe chill. October 23, acute bilateral tonsillitis appeared. October 26, there was delirium and opisthotonos. Laboratory reports, October 22, were that the spinal fluid was very turbid and the cell count 4 [illegible] Direct smear gave a pneumococcus. Cultures were negative.

[illegible] D. Appleton & Co.,

[illegible] Lobar Pneumonia with [illegible] 495-501 (July) 1918.

October 26, the fluid was turbid, white cell count 2,850, sugar negative, globulin positive, direct smear pneumococcus, culture negative.

October 29, a culture from the cerebrospinal fluid was reported positive for the pneumococcus. This patient received Kyes antipneumococcus serum from October 16 to October 29, intravenously and intraspinally, receiving in all 105 c.c.

December 1, his eye grounds and reflexes were normal, and his general condition was excellent. There was no evidence of sequelae.

Case 3.—W. E. F., aged 32, white, whose occupation was that of cook, was admitted to the hospital, Oct. 13, 1918. The patient's mother died in 1914, from cancer of the breast. The family history was otherwise negative. The previous personal history was good. The heart and lungs were negative. The genito-urinary system was negative. The special senses were normal. The present illness began, October 10, with a severe cold in the head, accompanied by headache, backache, flushed face, weakness and vomiting. The vomitus was blood-streaked. The temperature on admission was 102; pulse, 88; respiration, 28. There were râles at the base of both lungs. The reflexes were normal. The patient became delirious at once. October 15 the headache was still severe. Pneumonia with pleurisy was diagnosed in the right lower lobe.

October 21, the neck was stiff, the pupils were contracted and fixed, and the patient was semicomatose. The temperature was 100; respiration, 32. The laboratory report on the cerebrospinal fluid was white cell count 40 per cubic millimeter. Direct smear gave a few gram-positive, lancet-shaped diplococci. A culture revealed pneumococcus in pure culture. On the 26th, the spinal fluid was slightly cloudy, the white cell count was 180; sugar was positive, and globulin negative. Direct smear and culture were both negative.

From October 21 to the 26th, the temperature ranged from 100 to 103; the pulse for the most part, 90 to 100; respiration, from 30 to 40. There was gradual improvement until temperature, pulse and respiration became normal after November 1. Kyes antipneumococcus serum was injected intraspinally, October 21, 23 and 26. A direct improvement was noted, both mental and physical, after October 23.

Four doses of 5 c.c. each were given intraspinally and 5 c.c. of the same serum were given intravenously, once or twice daily, during the course of the pneumonia.

December 1, the eye grounds and reflexes were normal, the general condition was excellent, and there was no evidence of sequelae.

Case 4.—M. O., aged 22, colored, whose occupation was that of farmer, was admitted to the hospital, Oct. 27, 1918. The father had died from tuberculosis. The personal history was negative except for frequent tonsillitis. The present trouble began October 25, with chill, sore throat, stiff neck, aching all over, cough and some delirium, swollen tonsils, and follicular exudate. The heart and lungs were negative. Later, there was consolidation of the left lower lobe. The genito-urinary system was negative. The special senses were normal. The spleen was not palpable. The skin reflexes were normal.

November 14, there was diagnosis of meningitis. The Kernig sign still remained on the left side, the neck was stiff, and there was a suggestion of the Brudzinski sign. There was no Babinski or Oppenheim reflex; the pateller reflexes were sluggish. The abdominal reflexes of the left upper and lower quadrants and the left cremasteric were absent. Lumbar puncture revealed the cerebrospinal fluid to be under moderate pressure.

November 17, the spinal fluid gave a white cell count of 1,300; sugar was negative, and globulin was positive. Direct smear revealed numerous gram-positive diplococci; culture gave a pneumococcus. November 26, the white cell count was 6,400; sugar was positive, and globulin was positive. Direct smear was negative.

November 28, the cell count was 3,800; sugar was positive; globulin was positive; smear and culture were both negative.

The temperature ran a septic course, from 100 to 103; pulse, 88 to 108; respiration, 20 to 26, for this period of about two weeks. This patient was desperately ill and received 15 c.c. of Kyes serum intraspinally twice daily at first and later once daily, with 5 c.c. intravenously twice and later once daily. He received in all 453 c.c. On several days he received three intraspinal injections within twenty-four hours on account of the severity of the meningeal symptoms.

Leukocytosis varied between 16,000 and 18,000, but only four counts were made and those between October 20 and November 15.

December 2, the eye grounds and reflexes were normal. The patient's general condition was excellent. There was no evidence of sequelae. Temperature, pulse and respiration were normal. The patient ate and slept well.

Case 5.—N. J. S., aged 25, white, whose occupation was that of farmer, was admitted to the hospital, Dec. 9, 1918. The family history was negative. The personal history gave the usual diseases of childhood. The patient had had "clinical influenza" in October and pneumonia a year previous to the present attack. There was no venereal history. The onset was accompanied by sore throat and headache, December 6, headache being so severe the previous night as to prevent sleep. The examination on the date of admission to the hospital was negative, except that the tonsils were injected and probably slightly swollen. The patient walked to the hospitla. December 11, the patient still complained of severe headache, mostly frontal; was rational and answered all questions promptly. On examination, the suboccipital muscles were stiff and the head slightly retracted. Tendon reflexes were exaggerated and marked Kernig and Babinski signs were present; the abdominal muscles were rigid, and general hyperesthesia was marked. Fifty c.c. of spinal fluid were withdrawn and 30 c.c. of antimeningococcus serum were introduced intraspinally. The spinal fluid gave a cell count of 5,400 per cubic millimeter; sugar was negative, and there was a slight increase of globulin. Direct smear gave a few gram-positive, lancet-shaped diplococci, morphologically pneumococci. Culture was negative after forty-eight hours.

December 11, after laboratory report was made on the morphology of the bacteria in the spinal fluid, 60 c.c. of spinal fluid were withdrawn and 20 c.c. of Kyes serum were introduced intraspinally and 5 c.c. intravenously. From this time until Dec. 28, the patient was continually delirious. Neck rigidity continued, with retraction of head until Dec. 17, when relaxation began to be evident. Severe headache was usually complained of during this period, and the reflexes continued to be exaggerated. The temperature ranged between 100 and 103, with slight morning remissions, until December 17, when decided remissions down to 99 began to occur, with afternoon rises to 102. The pulse ran between 60 and 80, and respiration, though often stertorous, was not affected in frequency. From December 17 until the 28th, symptoms gradually disappeared, until on the latter date the patient was fairly rational and was able to state on being questioned that he had no recollection of what had occurred up to that time; that he remembered nothing of the intraspinal injections. Laboratory reports on examinations of spinal fluids withdrawn when intraspinal medication was given revealed: December 13, cell count 16,000 per cubic millimeter; sugar was negative and globulin was positive. Direct smear gave gram-positive, lancet-shaped diplococci, morphologically pneumococci; culture was negative. December 16, the cell count was 4,000 per cubic millimeter; sugar was negative, and globulin showed a large increase. Direct smear disclosed many gram-positive diplococci, many of which were intracellular; culture revealed pneumococci. December 19, direct smear showed a few gram-positive diplococci, morphologically pneumococci, but culture was again negative.

After the first intraspinal injection of 30 c.c. of antimeningococcus serum, on December 11, 20 c.c. of Kyes antipneumococcus serum were injected intraspinally twice daily until December 17; 5 c.c. were also given intravenously twice daily.

December 18 and 19, 20 c.c. of serum were given intraspinally and 5 c.c. intravenously, both once daily, after which serum administration was discontinued, though the patient continued to have a slightly increased temperature between 99 and 100 until December 28, when it reached normal and remained so. Muscle rigidity and exaggerated reflexes have gradually been disappearing until at the present time (January

31) all such symptoms have virtually disappeared; and the patient can be said to have made a complete recovery. He has been up and about the ward for the last two weeks. December 15, ophthalmic examination showed a moderate swelling of the disks. December 26, there was a slight enlargement of veins but no tortuosity. There was a very slight swelling of the disks. It should be noted that no pulmonary involvement occurred in this case.[16]

All of these patients were treated in the open air, with the usual routine of digitalis and, when necessary, salines, morphin, bromids, atropin, epinephrin nd caffein.

e fragmentary and incomplete character of these istories is due to the stress of work in the hospital during this epidemic. As far as they go, however, they are absolutely dependable.

The laboratory work was done under the able direction of Capt. E. F. Hirsch, in charge of the pathologic service of the base hospital.

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COMPARATIVE PROGNOSIS OF TUBERCULOUS LESIONS OF RIGHT AND LEFT LUNG

ORT OF FIVE HUNDRED CASES

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During the routine reexamination of patients in the women's service at the Ohio State Sanatorium, it had n my observation that cases with the greater amount tive involvement in the left lung made progress ower toward quiescence than cases in which the right lung was more involved. A few years ago, while doing a large number of necropsies on tuberculous subjects, I repeatedly noticed that in the majority of cases of bilateral tuberculosis the right lung showed considerable involvement at the apex, with a marked tendency toward fibrosis; whereas the left lung was usually heavily infiltrated from the apex to the base, with a thickening of the pleura and very firm pleural adhesions but with very little fibrosis of the lung. From this I judged that the initial lesion had been in the right lung, but that the left lung showed the greater amount of active involvement.

Since that time, in closely observing roentgenograms of moderately advanced and of advanced cases, I have noticed that the right lung shows evidence of heavy fibrosis much more frequently than does the left lung. In checking up a number of pneumothorax cases I found that in 75 per cent. the left lung was the one that had to be collapsed; and if we considered the cases in which pneumothorax was advised but patients would not consent to it, the percentage of leftsided cases would be far greater than this.

With the assistance of our statistician, Miss L. A. Steeves, I compiled the results secured in the treatment of the last 350 patients admitted to the sanatorium whose length of stay was six months or longer, and also of the last 150 patients admitted whose stay was one month or less—who were classed as far advanced cases on admission and were discharged as too sick for our sanatorium routine. Our findings compare fairly closely with the report given by Tecon and Aimard,[1] except for the fact that we found a greater percentage of left lung infections in the advanced cases than they. In their report they state that in 77 per cent. of their pneumothorax cases the left lung was the one collapsed, and that of 83 per cent of incipient cases that were apparently healed, only 7.5 per cent. were of the left lung. They also mention that 14 per cent. of left lung cases had grown worse as compared with 6 per cent. of right lung cases.

TABLE 1.—LUNG INVOLVEMENT IN ONE HUNDRED AND FORTY-EIGHT FAR ADVANCED CASES IN WHICH THE PATIENTS WERE DISCHARGED AS TOO SICK

	Number	Per Cent.
Right lung	59	40
Left lung	89	60
Both lungs	89	60
Right most	37	25
Left most	52	35
Left lung only	37	25
Right lung only	22	15
Right cavity	37	25
Left cavity	35	24

Owing to the lack of hospital facilities, the institution is unable to take care of far advanced cases needing absolute bed care. If a patient is unable to go to the dining hall for his meals, owing to a constant high fever, marked constitutional symptoms, hemorrhages, or general weakness, which may necessitate absolute bed care for a long period of time, he is discharged as too sick for our routine. It is from this group that Table 1 was compiled.

In reviewing the 148 cases that were discharged as unimproved, their stay at the institution being less than one month, there were 40 per cent. in which the right lung was involved either alone or with some involvement of the left lung, and 60 per cent. in which the left lung was involved alone or with some involvement of the right lung. Sixty per cent. of the total showed evidence of active tuberculosis in both lungs. Of the number of cases in which both lungs were involved, 25 per cent. of the total showed evidence of the greater amount of involvement in the right lung and 35 per cent. evidence of the greater amount of involvement in the left lung. Twenty-five per cent. showed the left lung alone involved, and 15 per cent. the right lung. The right lung showed evidence of cavity formation in 25 per cent. of the cases, as compared with 24 per cent. in the left lung.

TABLE 2.—MALE AND FEMALE PATIENTS WHOSE STAY WAS SIX MONTHS OR LONGER

	Male		Female	
Age	Number	Per Cent.	Number	Per Cent.
6 to 10	3	1.5	1	0.7
11 to 20	39	20.4	32	20.9
21 to 30	83	43.5	84	54.9
31 to 40	47	24.6	17	11.1
41 to 50	13	6.8	18	11.7
51 to 60	4	2.2	1	0.7
61 to 70	2	1.0	0	0.0
Total	191		153	
	344			

In analyzing these figures, it seems that in far advanced cases of active pulmonary tuberculosis the percentage of left lung infections is greater than of the right lung, whereas it has been proved that the majority of early tuberculous cases present right lung infections.

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16. The h[illegible] of this [illegible] well as i[illegible] t aid throughout the work, w[illegible] d by [illegible] . Gra[illegible] waukee, my valued assistant [illegible] ese; [illegible] e.

1. Tecon and Aimard: Pulmonary Tuberculous Processes, Rev. Méd. de la Suisse Rom. **37**: 45 (Jan.-Feb.) 1917.

AGE

In analyzing the age of the patients, the greatest percentage of tuberculous infections in both male and female occurred between the ages of 21 and 30, there being 43.5 per cent. male and 54.9 per cent. female within these age limits. In the female, the ages between 11 and 20 rank second in percentage, with 20.9 per cent.; whereas, in the male, the ages between 31 and 40 rank second, with 21.6 per cent.

CLASSIFICATION OF CASES ON ADMISSION

Of the 191 male patients, 12 per cent. were classed on admission as incipient, 67.6 per cent. as moderately advanced, and 20.4 per cent. as advanced. Of the 153 female patients, 26 per cent. were classed as incipient, 54.9 per cent. as moderately advanced, and 19.1 per cent. as advanced. The National Tuberculosis Association standard of classification was used, cases being considered Turban I, II or III, respectively. From Table 3 we see that there were more than twice as many female incipient cases in comparison with the number of male incipient cases, and less female moderately advanced and advanced cases than there were male.

TABLE 3.—CLASSIFICATION OF CASES ON ADMISSION

	Male			Female		
	Number	Per Cent.	Per Cent. of Total	Number	Per Cent.	Per Cent. of Total
Incipient, Turban I	23	12.0	6.7	40	26.0	11.6
Moderately advanced, Turban II	129	67.6	37.5	84	54.9	24.4
Advanced, Turban III	39	20.4	11.4	29	19.1	8.4
Total	191			153		
	344					

LUNG INVOLVED

In reviewing Table 4 we find that there were 172 cases in which the right lung showed the greater amount of involvement and the same number in which the left lung was more involved. In the male, the incipient cases showed 8.1 per cent. right lung infections as compared with 5.2 per cent. left; the moderately advanced cases, 45.3 per cent. right as compared with 29.5 per cent. left; and the advanced cases, 9.3 per cent. right compared with 13.4 per cent. left. In the female incipient cases there were 12.2 per cent. right compared with 11.6 per cent. left; moderately advanced cases, 19.2 per cent. right compared with 29.1 per cent. in the left; and in the advanced cases, 5.9 per cent. right compared with 11 per cent. in the left lung.

TABLE 4.—INVOLVEMENT OF RIGHT AND LEFT LUNGS

	Right			Left		
	Number	Per Cent.	Total Per Cent.	Number	Per Cent.	Total Per Cent.
Incipient:						
Male	14	8.1	4.2	9	5.2	2.6
Female	21	12.2	6.1	20	11.6	5.8
Moderately advanced:						
Male	78	45.3	22.7	51	29.5	14.8
Female	33	19.2	9.6	50	29.1	14.6
Advanced:						
Male	16	9.3	4.6	23	13.4	6.7
Female	10	5.9	2.8	19	11.0	5.5
Total	172			172		
	344					

In analyzing this table, we find that in the incipient cases the percentage is greater on the right side, and in the male the percentage of moderately advanced right side cases is almost 2:1, as compared with the left, but in the female the ratio of left to right-side infections is about 3:2. In the advanced cases the percentage of right side infections as compared with left is exactly reversed to the percentage of male incipient cases, and the advanced cases in the female show a left to right proportion of 2:1. The greater percentage of right-sided cases in the incipient stage of both male and female, and the moderately advanced stage of the male, is counterbalanced by the moderately advanced left-sided female cases and far advanced cases of both male and female, making the percentage of left and right equal when all stages of the disease are considered.

TABLE 5.—LUNG INVOLVEMENT IN THREE HUNDRED AND FORTY-FOUR CASES

	Right Lung Only		Left Lung Only		Total Both Lungs		Both Lungs			
							R. Most		L. Most	
Total Cases	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.
344	40	11.3	35	10.2	269	78.5	133	38.6	136	39.9

Of the 344 cases, 11.3 per cent. had the right lung alone involved, 10.2 per cent. the left lung alone involved, and 78.5 per cent. showed both lungs involved, 38.6 per cent. having the greater involvement in the right lung and 39.9 per cent. showing the greater amount of involvement in the left lung.

CONDITION ON DISCHARGE

Of the patients discharged as arrested, 16.6 per cent. were right-side cases; whereas there were only 8.8 per cent. left-side cases. The proportion of right-side as compared with left-side cases in the male was 4:3, and in the female the proportion was 4:1. Of the female cases there were only 4.5 per cent. of left-side cases discharged as arrested, and in the male 13.2 per cent. The male cases discharged as apparently arrested showed a proportion of right to left of about 3:1; whereas in the female cases the proportion was 2:1. There were 7.2 per cent. apparently arrested cases of left lung infections in the male and 10.1 per cent. in the female. The percentage that reached the stage of quiescence was greater in the left of both male and female than in the right, the proportion in the male being 3 left to 2 right, and in the female almost 2:1. The percentage of improved and unimproved in the male cases was greater in the left, whereas the right lung improved in the greater percentage of cases in the female. The percentage of unimproved in the female showed a proportion of about 2 left to 1 right.

TABLE 6.—CONDITION ON DISCHARGE

	Male				Female			
	Right		Left		Right		Left	
	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.
Arrested	19	17.6	11	13.2	10	15.6	4	4.5
Apparently arrested	22	20.3	6	7.2	11	17.2	9	10.1
Quiescent	23	21.3	26	31.3	15	23.4	34	38.2
Improved	23	21.3	20	24.1	23	35.9	27	30.3
Unimproved	21	19.5	20	24.1	5	7.8	15	16.9
Total	108	56.5	83	43.5	64	41.8	89	58.2
	191				153			

Table 6 shows very clearly that in the male cases there is a greater tendency toward arrestment or apparent arrestment than in the female, and that in both male and female the right lung becomes arrested or apparently arrested far more often than does the left lung. The left lung cases show a great tendency toward becoming quiescent, but the progress from this stage seems to be much slower in the left than in the right.

SPUTUM ANALYSIS ON ADMISSION AND DISCHARGE

The sputum specimens of the right incipient cases of the male that were positive for tubercle bacilli on admission all became negative before discharge; but in both the right-side and the left-side cases of the female incipient cases the sputum remained unchanged.

TABLE 7.—SPUTUM ANALYSIS ON ADMISSION AND DISCHARGE

	Male				Female			
	Right		Left		Right		Left	
Incipient:	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
Admission	5	9	4	5	5	16	5	15
Discharge	0	14	3	6	5	16	5	15
Moderately advanced:								
Admission	63	15	45	6	17	16	33	17
Discharge	57	21	42	9	13	20	37	13
Advanced:								
Admission	15	1	21	2	8	2	16	3
Discharge	14	2	21	2	7	3	17	2

In the moderately advanced and advanced left-side female cases there was a greater number with positive sputum on discharge than on admission.

AVERAGE LENGTH OF STAY IN MONTHS

The average length of stay of the incipient cases was about 8.7 months. The left female cases stayed the longest time, averaging 10 months. The length of stay of the moderately advanced cases averaged 9.9 months, the female cases averaging about one month longer than the male. The average length of stay of the advanced cases was about 9.1 months, the male left-side cases averaging the longest stay, which was 11 months.

In 15.1 per cent. of the cases the left lung got worse and in 12 per cent. of cases the right became worse. The left-side cases averaged about 0.4 degree higher temperature on admission than did the right-side cases, and averaged about two weeks longer for the temperature to drop to *normal* or subnormal, in cases which reached this stage. The left-side cases were more persistent in presenting a constant or an occasional afternoon increase of temperature. There was no apparent difference in the pulse rate of either right-side or left-side cases, and all cases averaged about four months for the pulse to drop to 90 or lower at all times during the day in those that reached the point of quiesence, apparent arrestment or arrestment.

TABLE 8.—AVERAGE LENGTH OF STAY IN MONTHS

	Incipient		Mod. Advanced		Advanced	
	Right	Left	Right	Left	Right	Left
Male	8.5	7.8	9.8	9.1	7.8	11.0
Female	8.7	10.0	10.6	10.1	8.7	8.8

The average gain in weight of the right-side cases was 12.8 pounds as compared with 14.8 pounds of left-side cases.

I have repeatedly noticed that patients who gain a great deal of weight very rapidly will not stand exercise as well as those in whom the gain in weight is not so rapid, or in whom there is not very much gain in weight. The patients who gained weight very rapidly showed a tendency to become tired and to have a rise in temperature with a very rapid pulse on the least exertion, and they had to be given absolute bed care for a longer period of time, in spite of their gain in weight and their apparent rapid improvement, than patients with the same amount of involvement in the right lung. In patients who gain in weight very rapidly, exercise must progress slowly; but once they attain the point of a resistance against a small amount of exercise, then graduated exercise progressing fairly rapidly may be instituted.

All patients were examined about every two months, the weight was taken every week, and records were kept of the daily conduct of the patient.

The percentage of cases that showed albumin in the urine was very small. Two of the patients showed evidence of sugar in the urine on admission and on discharge, and another patient showed sugar on admission but no sugar on discharge.

CONCLUSIONS

In the far advanced cases that were discharged from the institution as too sick for our routine, the percentage of left-side cases was greater than of right. From this we can plainly judge that in this type of case, when the left lung shows the greater amount of involvement, the prognosis of building the person back to some working capacity or of bringing the chest to at least a point of quiescence is far less than of the right lung cases.

In the case of patients whose stay was six months or longer, the percentage of left-side cases which became apparently arrested or arrested was far less than of right-side cases, even though the average length of stay was slightly longer. This would also point to the fact that the prognosis of left lung infections, even in incipient cases, is considerably less favorable than of right-side cases. To say that a left lung infection will not improve or will not become quiescent may not always be true; nevertheless it is a fact that these cases make much slower progress than the right-sided cases, and the percentage of these patients returned to a normal working capacity or to a state of health in which they may enjoy life is far less than of those with right-side involvement.

Patients with left-side involvement should be given a longer period of absolute bed care; and when exercise is begun, it should be prescribed guardedly and increased slowly. A number of these patients may present a normal or a subnormal temperature with only a slight variation between morning and afternoon and a fairly constant pulse, but on physical examination will show little tendency toward fibrosis, and when exercise is prescribed may stand it very well for a while but will have a return of clinical symptoms, which is their first warning of a possible breakdown, much sooner than a patient with the same amount of involvement in the right lung.

There are several reasons which may account for the more rapid spread of a tuberculous focus in the left lung than in the right. The left lung is considerably smaller than the right and has but two lobes. The bronchus leading to the left lung forms a more obtuse angle and is much smaller than the right bronchus. There are two fissures on the right and only one on the left. The interlobar clefts fence in the infection and prevent one lobe from becoming infected by the other except through the regular channels along the bronchial tree. This fencing by the interlobar pleura is repeatedly seen on roentgenograms of the chest and also in the sectioning of tuberculous lungs at necropsy.

SUMMARY

1. The amount of involvement being equal, the prognosis of lesions of the left lung is not as good as of the right.
2. Prognosis of the male cases is better than of the female cases.
3. There is less tendency toward fibrosis in the left as compared with the right lung.
4. Patients with active tuberculous lesions in the left lung require absolute bed care over a longer period of time than the right-side cases to produce the same results.
5. Rapid gain in weight, especially of the left-side cases, does not always mean rapid progress toward quiescence.
6. Artificial pneumothorax of the left lung is more frequent than of the right.
7. The greater number of incipient cases show tuberculosis of the right lung, and the greater number of advanced cases in the left lung. The percentages of right and left lung cases are equal when all stages of the disease are considered.

A REPORT OF SIXTY CASES OF WOUND DIPHTHERIA *

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WITH BACTERIOLOGIC APPENDIX BY

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FRANCE

I. CLINICAL

By Lieutenant Hartsell

In reporting these cases of wound diphtheria it is necessary, first, to say a word about throat diphtheria occurring in our hospital. During the fall and early winter, throat diphtheria appeared; and while it never approached a real epidemic, its incidence was greater than would be expected in a hospital community. Our hospital during this time furnished more cases than any other unit, and some weeks furnished about two thirds of all the cases in a center of from eight to twelve hospital units. In our hospital, Ward A-1 furnished most of the cases. The first case of throat diphtheria appeared in Ward A-1, Oct. 14, 1918. Up to November 15, five other cases of throat diphtheria appeared. November 16, a general throat culture of the entire ward disclosed five carriers. In December, five clinical diphtherias and four carriers were found. January 2, another carrier was found. From October 14, to date, February 1, therefore, Ward A-1, with patients ranging from eighty to 150, had eleven true throat diphtherias and ten carriers, and it was in this ward that the outbreak of wound diphtheria centered.

The first case of wound diphtheria appeared in a large debrided wound of the thigh. This wound was of several weeks' standing and had been doing well under Carrel-Dakin treatment until November 20, when it suddenly showed a gray-black membrane quite typical of wound diphtheria. Cultures this date and December 9 and 12 were negative. December 13, however, showed a positive culture. Subsequent cultures were positive up to December 31, and then remained negative.

This discovery focused attention on wounds in this ward as the possible source of the continual throat diphtheria. Cultures of all the wounds in the ward were taken on the 13th, and eighteen were found positive. The ward was immediately placed under strict quarantine and the most careful wound technic established.

The large number of cases in Ward A-1 raised a question as to the other wards. Cultures of the patients in these were then taken about once each week, and to date forty-one cases have been found in the other fourteen surgical wards, each ward having from thirty to sixty patients. All these cases picked up in the other wards were immediately transferred to Ward A-1, partly for better isolation and partly for more intensive treatment and more systematic study as a group. The cases in the other wards were irregularly scattered. Some wards had none, others from one to five. In some wards new cases would be found on each successive weekly test, although the patients found the week before were removed at once. Some wards showed a case or two on the third test which had been negative on the previous two. Three cases were picked out of a group of 100 surgical patients who were transferred to our hospital from another unit in the center.

REPORT OF CASES

CASE 1.—Sergeant T. was admitted to Ward A-1, Oct. 8, 1918, with a gunshot wound of the right thigh. November 29, the wound showed a dirty gray membrane; cultures on this date and on December 9 and 12 were negative. December 13, wound culture was positive. Cultures twice weekly remained positive until December 31, during which time the patient had received four doses of diphtheria antitoxin of 20,000 units each. On this date the Carrel-Dakin treatment was discontinued and the wound cleaned with a 1 per cent. soap solution, ether and alcohol and painted with U. S. P. tincture of iodin once daily. All subsequent cultures have remained negative. The Schick test, December 17, was negative.

CASE 2.—Private N. was admitted to Ward A-1, October 7, with a shrapnel wound of the right thigh. The Carrel-Dakin treatment was used until December 6. A dichloramin-T dressing was then used until the 13th, when wound culture showed positive for diphtheria. The wound was then treated daily with tincture of iodin as in Case 1, and on December 18 wound culture was negative and cultures twice weekly since then have remained negative. The Schick test, December 17, was negative.

CASE 3.—Private G. was admitted to Ward A-1, November 3, with a large, infected, debrided wound of the buttocks, which was treated by the Carrel-Dakin method. December 13, it showed a positive wound culture and remained positive until December 31. January 1, the Dakin tubes were removed and the wound cleaned and painted with tincture of iodin. Since then all cultures have been negative. The Schick test, December 17, was negative.

CASE 4.—Private K. was admitted to Ward A-1, October 4, with a gunshot wound of the right leg with a compound comminuted fracture of both bones. December 13, it showed a positive culture. December 20, culture was negative, and all subsequent cultures were negative. This wound was treated entirely by the Carrel-Dakin method. The Schick test was negative, December 17.

CASE 5.—Corporal K. was admitted to Ward A-1, November 14, with multiple small furuncles of both ankles. These

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* Owing to lack of space, this article is abbreviated in THE JOURNAL by the omission of some of the case reports. The complete article appears in the reprints.

were dressed with dichloramin-T. December 13, they showed a positive cure for diphtheria. A dressing of tincture of iodin was applied daily. December 23, culture was negative and has remained negative. December 17, the Schick test was positive, and the patient was given 1,500 units of antitoxin.

Case 6.—Corporal C., admitted to Ward A-1, October 7, with a through-and-through gunshot wound of the left thigh, presented two large debrided wounds, one on the outer and one on the inner side of the thigh. Both showed a positive culture, December 13. The inner wound was treated with neutral solution of chlorinated soda (Dakin's solution) every two hours, and the outer wound with a wet dressing of 5 per cent. acetic acid. Both wounds remained positive until December 27, when the foregoing dressings were discontinued and the wound treated with tincture of iodin. Since then all cultures have been negative. The Schick test, December 17, was negative.

Case 8.—Private E. was admitted to Ward A-1, November 12 with a large wound of the left buttock which was treated by the Carrel-Dakin method. December 13, culture was positive, and the wound remained positive at each subsequent culture until January 31, *in spite of any type of treatment.* The wound was treated at first with Dakin's solution, and the patient received four doses of diphtheria antitoxin of 20,000 units each. Dakin's solution was discontinued and the wound dressed twice daily with undiluted diphtheria antitoxin. Since January 9, the wound has been dressed twice daily with tincture of iodin, and we were able to get our first negative culture, January 31. The wound, however, has remained "clean," and healing has progressed rapidly. The Schick test, December 17, was negative.

Case 11.—*Private B. was admitted to Ward A-1, October* 17, with a large debrided wound of the left thigh, which was treated with dichloramin-T. December 13, wound culture was positive. Dakin's solution was given a thorough trial; then 5 per cent. acetic acid as a wet dressing was used, and on December 31, the wound was cauterized with pure phenol neutralized in a few seconds with alcohol, but with negative results. January 2, tincture of iodin was used, and on the 6th we obtained a negative culture and the wound has remained negative with daily dressings of *tincture of iodin.* December 17, the Schick test was negative.

Case 15.—Private W. was admitted to Ward A-1, October 4, with a gunshot wound of the left foot, which was dressed daily with dichloramin-T until December 13, when culture showed positive. This was another very obstinate case and was complicated by a very marked dermatitis which had been caused either by the improper preparation or the improper application of the dichloramin-T. The wound was dressed daily with iodin, and with the exception of negative culture, January 9, remained positive until January 24. Cultures since then have been negative. The Schick test was positive.

Case 20.—Private B. was admitted to Ward A-1 from Ward A-2, December 17, with positive wound culture for diphtheria. The wound was treated with tincture of iodin, and on December 20, culture was negative. December 21, the Schick test was positive. Throat culture proved the patient a diphtheria carrier, and he was transferred to another hospital in the center for diphtheria carriers.

Case 29.—Private C. was admitted to Ward A-1 from Ward A-4, December 19, with a positive wound culture for diphtheria. This wound was covered with a dirty gray membrane, and diphtheria antitoxin was used; 20,000 units were given every forty-eight hours for four doses, with negative results. The wound was treated daily with tincture of iodin, and the first negative culture was obtained, December 31. All cultures since then have been negative. The Schick test was negative.

Case 33.—Private S. was admitted to Ward A-1 from Ward B-1, December 20, with a positive wound culture. This wound was covered with a thick gray membrane quite typical of diphtheria. Tincture of iodin was used daily until December 26 with negative results, when the patient developed clinical diphtheria and was transferred to an isolation ward in another unit. The Schick test was negative.

Case 43.—Private N. was admitted to Ward A-1 from Ward B-10, December 30, with a positive wound culture. The wound was covered with a typical diphtheritic membrane. It was cauterized with pure phenol neutralized in a few seconds with alcohol, but culture the following day showed positive. Diphtheria antitoxin undiluted was then used as a wet dressing twice daily, but with negative results up to January 24. The wound was then treated with tincture of iodin, and cultures the 28th and 31st have been negative. The Schick test was negative.

Case 46.—Private F. was admitted to Ward A-1 from Ward A-4, January 2, with a positive wound culture. Tincture of iodin was used daily, and on January 3 wound culture was negative; but a culture from the throat proved the patient to be a carrier, and he was transferred to another hospital for isolation.

Case 51.—Private D. was admitted to Ward A-1, October 16, with a gunshot wound of the hip. This was one of the original twenty "negative" cases left in Ward A-1 at the beginning of quarantine. All cultures up to January 6 were negative, but on this date the culture showed positive. Dakin's solution was discontinued and the wound treated with tincture *of iodin daily.* January 9, the culture was negative, and all subsequent cultures have been negative.

Case 60.—Private R. was admitted to our hospital, January 27, from another unit in the center. Wound culture on this date was positive for diphtheria. The patient was transferred to Ward A-1 from Ward B-2 and the wound dressed daily with tincture of iodin. January 31, culture was reported negative.

SUMMARY

1. In none of these wounds were there any systemic symptoms referable to diphtheria toxin. Most patients were well in every way and none showed any elevation of temperature other than what might well be explained by a large debrided wound.

2. The clinical appearance of the wounds varied. Twelve per cent. showed a gray membrane quite typical of diphtheria. About one half showed only a faint grayish discoloration of the granulating surfaces which under ordinary conditions would have passed unnoticed. About 6 per cent. looked absolutely healthy and ready for secondary closure.

3. So far as could be observed, the presence of diphtheria bacilli in the wound had no effect at all on wound healing. Wounds that were slow in healing invariably had large numbers of other organisms present. Wounds that appeared clean progressed in the ordinary way. And two wounds were positive up to the date of complete healing.

4. Forty-three patients received the Schick test. Six were positive. This is about the percentage for all adults.

5. The resistance to treatment varied greatly. In some cases diphtheria disappeared with two days' intensive treatment, while others were very resistant, as Cases 9, 15 and 43, which remained positive for forty-nine, forty-two and twenty-four days, respectively, in spite of all treatment.

6. By far the most efficient treatment has been the use of tincture of iodin. Under the most rigid asepsis the wound was cleaned with a 1 per cent. soap solution, ether and alcohol, and then painted with U. S. P. tincture of iodin, care being taken to protect the surrounding skin. Under this treatment the average duration of positive cultures was six days. Fifteen cases cleared up under forty-eight hours, and only eleven cases remained positive longer than one week.

Diphtheria antitoxin, up to four doses of 20,000 units each, was given in four cases, but had no effect in ridding the wounds of diphtheria. It was never necessary to give it for its systemic protection. Diphtheria antitoxin as a wet dressing was used in two cases, but without effect.

Acetic acid, suggested as a specific, was given a thorough trial in four cases, but was also of no value.

Two wounds cauterized for a few seconds with phenol were reported positive the next day.

The Carrel-Dakin method, applied very exactly in eight cases, was a failure in six. Two of the cases cleared up within forty-eight hours, but in my opinion they would have cleared up just as quickly under the iodin treatment. In the six failures the method was used over periods of from two to three weeks each, and these wounds cleared up very promptly after the Carrel-Dakin method had been discontinued and the iodin treatment instituted. Dakin's paste was not available. Dichloramin-T had previously caused so much skin irritation in the unit that its use had been discontinued by order.

II. BACTERIOLOGIC

By MAJOR MORRIS

Entering on the discussion of this series of wound diphtheria cases from the point of view of bacteriology, pathology and hygiene, let me first call attention to the fact that we are well aware that not all of our series were infected with virulent diphtheria organisms. Owing to a dearth of laboratory animals, however, it was not possible to test the offending organisms for virulence. One that we did test proved beyond the shadow of a doubt that it possessed virulence to a high degree. Our criterion in branding wounds as infected with diphtheria bacilli was based purely on cultural methods, with the resulting study of the morphologic characteristics, and to some extent the biologic. We also realize the fact that a wound might contain diphtheria bacilli and yet not necessarily be a case of wound diphtheria, any more than diphtheria bacilli found in a clinically normal throat make that a case of throat diphtheria; yet as we consider the latter a "throat carrier," so must we consider the former "wound carriers."

We called diphtheria bacilli only such organisms as showed the typical morphologic characteristics, that is, those which showed when grown for from eighteen to twenty-four hours on Loeffler's blood serum medium as slender rods of practically uniform thickness except for the "clubbing" at both extremities. The stain used was Loeffler's alkaline methylene blue, and microscopically it showed the organisms taking a blue stain throughout except at the extremities. The bodies either appeared granular (fine) or had the striped appearance so often noted. The "clubbed" ends took on a more violaceous hue and were homogeneous. Some showed a central swelling.

Let me add the following data in proof of virulence: As is noted above in this paper, from Oct. 14 to Nov. 16, 1918, six clinical throat diphtheria cases and five carriers were discovered in Ward A-1. During December, 1918, five more true throat diphtherias and four more throat carriers were found in this ward. Up to this time, or rather up to Dec. 13, 1918, we followed the routine prophylactic course for eradicating diphtheria in the hospital by repeated throat cultures for the detection of carriers, and it was always an easy matter to find a carrier in this ward for reasons that will soon become apparent. Yet the incidence of throat infection continued unabated, despite repeated culturing, quarantine, etc. The futility of the methods used is what prompted us to seek the cause elsewhere than in the throat. Accordingly, Dec. 13, 1918, all of the wounds in Ward A-1 were cultured on ordinary Loeffler's blood serum medium. Twenty-eight positive wounds were found, some of the patients having two or three positive wounds.

The following steps were at once taken: 1. Absolute quarantine of the ward was established, and by this is meant that no one was allowed to leave the ward except the ward surgeon and the nurses. Even the enlisted personnel employed in the ward were sequestered there. Food, clothing, etc., were brought to the door of the ward and left there. 2. Blankets, mattresses, pillows, bedclothing, etc., were all thoroughly sterilized, for here were materials that were undoubtedly harboring billions of the provoking organisms after coming into such intimate contact with badly infected dressings. From these infected bedclothes, etc., the organisms were carried far and wide by the hands and clothes of the patients, attendants and others. 3. Routine cultures of wounds and throats were taken both in this and in the other wards. 4. Schick tests were performed in this and other wards, but the value gained from this source was negligible. 5. Extra precautions as regards sterility of dressing instruments and dressings were taken.

Soon after the foregoing precautions were taken, the incidence of throat diphtheria fell. From Dec. 13, 1918, to Jan. 1, 1919, the record of throat diphtheria in Ward A-1 was two cases, one coming to light, Dec. 21, 1918, and the other six days later. Between Jan. 1 and Feb. 1, 1919, no cases of throat diphtheria developed in that ward, and the incidence of diphtheria throughout the entire hospital during that month was practically nil.

AN EPIDEMIC OF BRONCHOPNEUMONIA

ROENTGENOLOGIC STUDY

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During the recent epidemic of respiratory infection at this cantonment, arrangements were made to examine by screen or plate all cases of so-called influenza that were admitted to the base hospital. These examinations were undertaken because of the detection of many cases of mild bronchopneumonia during the routine examination of the chests of the draftees, of whom about 23,000 have been fluoroscopically studied for the tuberculosis board of Camp Lewis. In this study, many cases of bronchopneumonia of one or both bases were discovered. Each case was examined carefully, and each patient stated that he had been suffering with a cold for several days. Verification of the diagnosis of bronchopneumonia was obtained clinically.

So much assistance was afforded the clinician, that after a few weeks at the suggestion of Capt. Charles A. Ballard, all patients except those distinctly pneumonic were admitted to the observation ward and roentgenographed before being distributed to the different pneumonia wards. Those admitted in the evening were sent to the roentgen-ray laboratory the next day at 11 a. m. Those only slightly ill were screened, while those more seriously ill were plated. The fluoroscopic reports were immediately returned to the observation ward. The plates were developed at once and the report was furnished in about one hour. The patients were then distributed to the various wards.

In the neighborhood of 7,000 influenza patients were subjected to roentgenographic examination. Those able to walk were screened but ill patients were ught to the roentgen-ray laboratory, well wrapped, the hospital litter carts, and were placed on the able face down, without being allowed the least exertion. A stereoscopic set was made, for the most part gas tubes being used because they produce a plate of better detail and more contrast than does the Coolidge. Although the work proved to be more wholesale than delicate, we strived to obtain the most perfect plate, and our plates were surprisingly uniform, possessing excellent detail. The desperately ill patients were examined in the ward by means of the portable bedside unit. Exposure was made on the thin double coated film between two block screens.

Bronchopneumonia was found in some 2,200 cases. By far the larger percentage (about 80) was an involvement of one or both bases. All degrees of involvement in all combinations were found. The lobe involvements were classed as mild, moderate or severe in the different lobes. The parenchymal involvement we tabulated as:

1. Peribronchial, only the air sacs adjacent to the bronchioles being involved (capillary bronchitis?).
2. Central, apparently beginning at the hilum and extending bronchogenetically toward the periphery.
3. Confluent, involving an entire lobe and presenting a picture suggestive of lobar pneumonia.
4. Lobular, which distinctly involved the lobules.
5. Diffused, presenting one or more of the foregoing in an entire lobe, an entire lung or both lungs.

We were often able to suggest bronchopneumonia before clinical findings were obtained. This was especially true in those cases in which the involved area was small and centrally located in the body of the lobe, particularly the lower. Again, our findings were often indefinite when the clinical indications were pronounced. This occurred in those cases in which the process was posteriorly situated, especially as the area was far removed from the plate (the patient lying face down). In the very mild parenchymal involvement occuring in the capillary bronchitis, the plate showed definite indications while physical findings were minimal. Medium and coarse râles were heard, but the finer ones were not made out, especially if centrally located, until the process became more advanced. It usually did so in a few hours, and the most painstaking physical examination was necessary in many cases before the delicate change in breath sounds, the slight dulness and the finer râles of bronchopneumonia were detected.

A great many cases were examined a number of times and the process was watched, as it insidiously advanced from the small primary area to a very extensive involvement of both lungs. Every possible complication was found and studied.

In addition to the exact involvement of the lungs, we made careful observations of the heart silhouette, and its area, position and configuration. Each patient's weight, age and height was reported on the request for roentgenographic examination. The heart condition was reported, allowing for a reasonable increase or decrease in area from the average. Cardiac stimulants were often suggested to the ward surgeon because of marked increase in the cardiac silhouette area with increase in radiability, as is the case in dilatation.

Five cases presented shadows indicative of a chronic tuberculous process in addition to the bronchopneumonia. The tuberculous process presents entirely different shadows than does the bronchopneumonia. This is very obvious when both processes are seen on one plate. Streptococcus bronchopneumonia is difficult to differentiate from an active fibrous tuberculosis, particularly during the resolving stage.

In many cases showing distinct shadows indicative of bronchopneumonia, the physical findings were absolutely negative, except for bronchitis. Our findings were so pronounced that we carefully investigated these cases and determined the areas of density resulting from parenchymal exudation. These cases subsequently presented the physical findings of mild bronchopneumonia. At necropsy, about 10 per cent. of the bronchopneumonia patients had one or more areas of parenchymal hemorrhage in addition to the areas of consolidation. This suggests that probably in some cases hemorrhage into the lung tissue was the beginning of the bronchopneumonic process.

After resolution is complete, abnormal shadows persist for some time. This is particularly true in the lower quadrants, where the trunks are large. It is, however, not difficult to distinguish an active from a resolved process. In many cases the streaks of air along the course of the blood vessels (emphysematous air streaks) are distinctly seen, and although they occur in all stages of the process, they are suggestive, for the most part, of beginning resolution. The air streaks are apparently the result of air sac rupture following increased distal pressure from impingement on the bronchiole. The air released into the interstitial tissues follows along the vessels as the path of least resistance. These air streaks are often readily made out as scalloped dark streaks leading toward the hilum.

For detecting mild processes and determining the extent of the involvement, the roentgen ray is an ideal means, and should be employed in every case of respiratory infection, both in civil and in military hospitals.

Roentgenographic findings are definite in bronchopneumonia and enable the clinicians to appreciate the extent of parenchymal involvement. The degree of involvement in bronchopneumonia should receive a more careful consideration. Many cases of "colds" and bronchitis present a mild degree of bronchopneumonia.

Direct Prophylaxis of Rabies.—All the dogs in the Kanagawa district, Japan, were inoculated last year against rabies, a total of 6,644 dogs. This region is said to include two cities and six districts. During the year there were twenty cases of rabies among the dogs in September, three in November and none in December. The preceding years the incidence of rabies reached its highest point in December. The *Japan Medical World*, which reports these facts, gives the details of Umeno's method of preparing the antirabic vaccine for the purpose, and its applications in the research described by Drs. T. Kitano and K. Sukegawa, sanitary officers of the Kanawaga prefecture, Yokohama. A single inoculation apparently answered the purpose; half the dose was injected on each side of the dog. No by-effects were observed of any moment,-merely an occasional transient local swelling.

A REPORT OF DIPHTHERIA AT CAMP CUSTER, MICHIGAN

FROM SEPTEMBER, 1917, TO MARCH, 1919

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AND
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At the beginning of the present war it was not altogether certain what effect the grouping of large bodies of men under military conditions would have on the incidence of diphtheria and the prevalence of diphtheria carriers. The mobilization and training during the last eighteen months of some 113,000 men at this camp has afforded an opportunity to observe locally such facts about diphtheria.

CASES OF DIPHTHERIA

From September, 1917, to March, 1919, a total of fifty-seven cases of diphtheria were admitted to the base hospital. Most cases ran extremely mild courses. Six days was the average length of time for the membrane to remain in the throat. Complications were rare. Two cases of paralysis and one of myocarditis resulted.

SUMMARY OF LABORATORY WORK ON DIPHTHERIA

Examinations for	Total Number	Found		Incidence in Hospital Attendants
		Number	Per Cent.	
Cases of diphtheria............	.....	58	....	5
Carriers of diphtheria..........	8,236	148	1.8	25
Nonimmunes (Schick test)......	7,851	808	10.3	

One death occurred as a result of streptococcic septicemia intervening after the diphtheria was clinically ended. The localization of the exudates was as follows: tonsils, 41; pharynx, 4; pharynx and tonsil, 10; pharynx and larynx, 1; nose, 1. The average white blood count was 15,000. Six cases showed albumin, and three, casts in the urine.

About 90 per cent. of the organisms isolated showed bipolar granules. Virulence tests were made by subcutaneous injection of guinea-pigs with pure cultures of the isolated organism. Of twelve organisms so tested, five proved to be avirulent. Too much reliance is probably placed on the so-called "virulence test" for diphtheria. McCord[1] points out the possibility of variation in virulence of diphtheria strains, and Meader[2] has shown in a number of strains that marked variations occur for the same organism in subcultures in morphology, fermentation reaction and virulence.

Diphtheria in this camp has been purely a sporadic disease, evidencing none of the epidemic characteristics sometimes attributed to it. The average incidence has been 2.6 cases a month, or a little less than 0.2 per cent. of the total admissions to the base hospital. Diphtheria has not been confined to any small group of organizations or to any geographic location of the camp. On the contrary, the cases have been widely distributed. Fifty different organizations are represented in the total of fifty-seven cases admitted to the base hospital. In those instances in which more than one case of diphtheria has occurred in one organization, more than thirty days have elapsed between cases. Only one organization has had as many as three cases of diphtheria. The season of the year has apparently made no difference. In January and June, 1918, there were six cases each. In September of the same year there were seven.

CARRIERS

A great deal of care has always been exercised in the search for carriers of diphtheria. For the greater part of the time it has been a routine procedure on finding a case of diphtheria to quarantine the company to which the patient was attached until two throat cultures taken at two-day intervals could be made, and Schick tests done and read. Thus, cultures have been taken of 8,236 persons. In more than half of the instances, these were taken a second time, making a total of 13,000 cultures. In all, 148 carriers were found. This was 1.8 per cent. of the number of persons examined. The diagnosis has in all cases been purely a morphologic one.

The solid-body type of organism has been most frequently found, but those showing polar bodies have also been encountered in a considerable number of instances. Twenty-four strains recovered from these cultures were inoculated into guinea-pigs. Of these, 88 per cent. proved to be avirulent.

The occurrence of carriers in different camp organizations was relatively large in only a few instances. In one company fourteen were found, in another ten, in another seven, and in two others, six each. Twenty-five carriers have been found among the base hospital personnel. Five of these were nurses or attendants in the diphtheria wards. With the above-mentioned exceptions, the average company has furnished a little more than two carriers of diphtheria. That many of the carriers are transient hosts for the diphtheria bacillus is shown in the rapid disappearance of organisms, in most cases, after entering the hospital. This was particularly true of the organizations showing a relatively high incidence of carriers. A number of these were doubtless case contacts.

In the case of chronic carriers, to rid the throat of diphtheria bacilli often required the greatest patience and persistence. The variety of methods employed indicates the inefficacy of most of them. Sprays of dichloramin-T, Dobell's solution, neutral solution of chlorinated soda (Dakin's solution), argyrol and finally a solution of antitoxin (5,000 units to 30 c.c. of water) gave place to one another as hope in a new procedure gained force in face of failure with an old. It seemed hardly possible to reach organisms like diphtheria bacilli with sprays, however bactericidal, buried as they often are in the tonsillar crypts. On numerous occasions it has been our experience after two negative cultures to make a culture from the depths of the crypts and find the organism.

Patients and carriers were discharged after three negative cultures. A number of these were instructed to return to the laboratory after two weeks for another culture. With one exception there were no cases in which we were able again to identify the diphtheria bacillus.

Striking results have been obtained after tonsillectomy. One patient, in spite of the most vigorous throat spraying, presented diphtheria bacilli continuously in his throat in forty-eight consecutive cultures. Tonsillectomy was done. The next three cultures were negative. Three other tonsillectomies were equally successful in patients that had presented diphtheria bacilli in their throats for forty, fifty-four and forty-six days, respectively.

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[1] McCord, C. P.; Friedlander, A., and Walker, R. C.: Diphtheria and Diphtheria Carriers in Army Camps, J. A. M. A. **71**: 275 (July 27) 1918.

[2] Meader, P. D.: Variation in the Diphtheria Group, J. Infect. Dis. **24**: 145 (Feb.) 1919.

Of the cases of diphtheria in the hospital, forty-eight showed 1,100 days of positive cultures, a case average of 20.9 days. Twenty-two of this number averaged much higher—from twenty-five to fifty-eight days.

Of the carriers, on the other hand, 121 had 1,421 days of positive cultures, averaging 11.7 days per case. However, many of the cases of diphtheria gave negative cultures before the expiration of two weeks, and those in which diphtheria bacilli were found after this period should be classed, for the most part, as chronic carriers.

SCHICK TESTS

Schick tests have been made at the time of culture of all persons exposed to diphtheria. In all, 7,851 have been done and 10.3 per cent. have been read as positive. This is about the recognized average incidence among naturally unprotected persons between 21 and 31 years. The usual technic in giving the test has been observed. Injections of diphtheria toxin were carefully made intracutaneously. Controls consisted of diphtheria toxin heated to 75 C. for five minutes. Readings were made at the end of forty-eight and ninety-six hours. The delayed reading was used to minimize the error from pseudoreactions.

It has been the custom to give 500 units of antitoxin prophylactically to all naturally unprotected individuals recently in contact with diphtheria. The opinion prevailed that the temporary protection afforded the susceptible individual more than compensated for the small danger of sensitization against horse serum, especially as desensitization before serum administration is now a generally recognized precautionary measure. The use of toxin-antitoxin mixture has not seemed practical on account of the time consumed in securing immunity by such a method.

SUMMARY

1. Diphtheria has not been a very prevalent disease at this camp. Of 113,000 soldiers trained here during a period of eighteen months, only fifty-seven developed this disease.
2. Of 8,236 throats of which cultures were taken, 1.8 per cent. were found to be carriers of diphtheria bacilli.
3. Of 7,851 Schick tests done, 10.3 per cent. were positive.
4. Tonsillectomy is the final and only satisfactory method of disposing of chronic diphtheria carriers.

Illiteracy Among Working Children.—The National Children's Bureau announces that in the five states where federal certificates of age are required for children going to work, among 19,546 children between 14 and 16 years of age, 5,294, or more than one fourth, could not sign their names legibly. In the five states, among 18,379 white children between the ages of 14 and 16, only 742 of them had reached the eighth grade in school; of 1,166 colored children to whom certicates were issued, only forty had reached the eighth grade. This means that 96 per cent. of white children and 97 per cent. of colored children granted certificates had not reached the eighth grade in school. In some states a work permit cannot be secured until the age of 16 unless the child has completed the eighth grade. Only 248, or 1.3 per cent., of the children certified by the Children's Bureau could have met such a requirement.

PHYSIOLOGY OF RESPIRATION IN TREATMENT OF WAR WOUNDS OF CHEST AND EMPYEMA

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Empyema is essentially a condition in which the normal physiologic processes of the lung and pleura on the affected side or sides are altered, impaired or suspended. These are replaced in part by defensive processes, namely, the emigration of leukocytes in response to the presence of pathogenic bacteria or foreign bodies; the outflow of lymph to dilute toxins and to fill spaces that were potential spaces only, in the normal organ; an increase in the blood vessels for nourishment and repair of the affected part; and round-cell infiltration to establish a direct barrier to the advance of bacterial infection and an indirect barrier to the spread of infection by immobilizing the motor mechanism through plugging its cellular spaces and lymphatic channels. This, in fact, is an inflammatory process with exactly the same characteristics as an inflammatory process in any other part of the body. Therefore, any plan for the treatment of the disease must be based on a careful consideration of the physiologic and pathologic problems involved, exactly as is done in the treatment of inflammation elsewhere.

An apparent disregard or misunderstanding of the true physiology and pathology is responsible for the disastrous high mortality mark of 84 per cent. in one army camp and an average mortality rate of 30.2 per cent. in all army camps, as was determined by the questionnaire of Feb. 21, 1918 (Empyema Commission report).[1] This unfortunate picture is further contributed to by the following statement from one camp:

> Convalescence is more than three months in duration in all cases, and not one has been found with full restoration to health. Of those finally released from the hospital, eight have been readmitted with recurrences, and not one has been able to resume a full duty status; it is very doubtful if any of these patients will become fit for the full performance of duty as a soldier within six months after operation, and the majority undoubtedly never will.

These statistics and this statement are from men of great ability as surgeons. It does not include the vast number outside the army who undertake the treatment of empyema because they are able to resect a rib, that being the sum total of the obligation on the part of the operator in many cases. Statistics are not published in any of these cases.

The best surgeons, the men who take into their wor the best known physiologic and pathologic treaching rely on these principles to obtain results: That th lungs which are inclosed in the thoracic cavity an entirely shut off from the pressure of the air fron without are pressed on from within by a force o approximately 15 pounds to the square inch. Th weight of the air, therefore, literally blows the lung out to fill the interior of the chest cavity. The interna capacity of the chest is increased by the contractio of the diaphragm acting as a piston moving downwar and by the contraction of the levator costarum and th external intercostal muscles pulling upward on th ribs. The weight of the air constantly exerting its force to press the lungs against the parietal pleura is known as the intrathoracic pressure and is equal to the intrapulmonic pressure minus the elastic recoil of the lungs. Also expiration, according to this theory, is due to a diminution in the size of the thorax through the relaxation of the diaphragm and the contraction of the internal intercostals, the triangularis sterni, and the transverse thoracic muscles, pulling the ribs downward, together with the elastic recoil of the lungs, there being, also, accessory muscles causing accessory respiratory movements. This commonly accepted mechanical view of respiration, which assumes that respiration is largely a passive act, should be examined in the light of clinical facts observed in the treatment of war wounds of the chest, in the treatment of empyema cases, and in connection with physical phenomena always considered unexplainable on this theory. These clinical facts should be suggestive for further experimental work.

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[1] The Empyema Commission: Cases of Empyema at Camp Lee, Va., J. A. M. A. 71: 366 (Aug. 3); 443 (Aug. 10) 1918.

CLINICAL OBSERVATIONS IN WAR WOUNDS OF THE CHEST

Pierre Duval,[2] chief of all the French lung and chest surgeons, whose experience was obtained at the Somme and in many later campaigns, says that surgery of the lung is a revolution. "Dread of pneumothorax had hitherto entirely limited the field of lung surgery, but the surgery of the war has triumphantly proved the value of the old and essentially French method of inducing pneumothorax." A large thoracotomy opening is made and the lung is withdrawn and operated on just as a coil of intestine is withdrawn from the abdomen. This method is a common practice of Moynihan[3] and all the surgeons of the Allied armies when fresh wounds of the chest require treatment. Lungs operated on in this way soon resume their normal function when replaced, and the chest is closed, whether or not the air is aspirated from the chest.

In chest wounds of moderate size it is a very common occurrence to find a part of a lobe of the lung bulging out of the wound plugging the opening in the chest wall. J. K. Murphy,[4] one of the leading British surgeons, says: "Traumatic hernia of the lung may occur immediately through free openings of the thorax." Van Reeth and Vouchen, Belgian surgeons, report a case of strangulated pulmonary hernia, and they express the opinion that this condition probably appears much oftener than is recognized.

The observation of the collapse of the lung, either massive or of one or two lobes, has frequently been made. Pasteur[5] was the first to report this as due to the reflex inhibition of the diaphragm which he had observed following an abdominal operation in which the diaphragm was not injured in any way. Crymble[6] reports fifteen cases of massive collapse of the lung. These fifteen cases were due to gunshot wounds of the chest. Ten of the collapsed lungs were on the side opposite to that of the injury. Rees and Hughes[7] report a series of 140 cases of gunshot wounds of the chest. These authors state that collapse of the lung is very frequent, as it is Nature's most potent method of arresting hemorrhage. They observe, also, that it is fairly common on the side not wounded. "It is of the utmost importance to grasp the fact," says Duval, "that not only does the actual wound affect the lobe traversed, but the other lobes of the same lung may sustain partial injury, and the opposite lung may, by contracoup, be more or less seriously injured." He describes these injuries as occurring usually about the hilum and as extensive contusions with hemorrhagic infiltrations.

It is interesting to note that Landis[8] reports cases from civil practice in which collapse of the lung occurring spontaneously is almost invariably on the right side, and that most of the cases of reflex collapse of the lung from trauma in war surgery occur on the left side.

A very fundamental principle established in war surgery of the lung is the terrible fatality of wounds of the diaphragm. The patient with a lung wound has an excellent chance for recovery. He may recover with a wound of a hollow viscus even if it is not sutured. But, to quote Lockwood and Nixon,[9] "as early as the middle of July, 1916, it was realized that practically all wounds of the diaphragm left unrepaired proved fatal."

CLINICAL OBSERVATIONS IN EMPYEMA CASES

That the diaphragm is motionless on the affected side, that it has lost its arch, that it is either quite flat or arched slightly downward is a common and universal observation in empyema. In the cases under treatment in the base hospital at Camp Upton, after several days during which the entire empyema cavity had been irrigated freely and thoroughly by several quarts daily of hypertonic solution according to the formula of Thiersch, and the treatment which was first recommended to this hospital by Major Delatour, I have been remarkably impressed with the occurrence of a very sudden change in the condition of the organs. Between the times of treatment the diaphragm has assumed an upward arch, either partly or wholly obscuring the view of the cavity. It has become contractile and very irritable to pressure or touch. The lung has now for the first time expanded, so that the cavity is almost completely filled. An approximate measurement of this is taken, incidentally, all the time by the fact that the cavity holds a quantity of the irrigating solution which almost fills a large pus basin. On the morning that the lung and the diaphragm have become active, only an ounce or two of the solution is required to fill the cavity. This condition exists for from two days to about one week in acute cases in which the time for operation has been properly chosen and in which the drain has been properly placed and is of sufficient size. The drainage tubes, which from the start have been of a length just adequate to hold the chest wall apart and not to project inside, are removed because they irritate the diaphragm and are an interference to the lung expansion. No attempt is made to close the wound in any case, with the rare exception when the muscle mass, chiefly the latissimus dorsi, gapes widely and it appears that the function of this muscle will be restored more quickly by uniting its cut ends and the skin over it. But the lung and the diaphragm are now thoroughly adapted to the presence of the air, with its varying temperature, and the blood within the lung reduced in quantity, since both lung and diaphragm are protected by a thick, edematous wall consisting of folds of pleura and underlying cellular tissue with abundant supply of lymph vessels; the lung continues to expand down to the open wound in the wall of the thorax (Fig. 1).

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[2] Duval, Pierre: War Wounds of the Lung, New York, William Wood & Co., 1918; Surgery of Gunshot Wounds of the Chest, Surg., Gynec. & Obst. **28**, No. 6.

[3] Moynihan, Sir Berkley: Surgery of the Lungs, Surg., Gynec. & Obst. **25:** 605 (Dec.) 1917; Observations upon the Medical Department of British Army, Clinical Congress, 1917, Chicago.

[4] Murphy, J. Keogh: Wounds of the Thorax in War, New York, Oxford University Press.

[5] Pasteur: Annual oration, Med. Soc. London, May, 1911.

[6] Crymble, P. T.: Gun Shot Wounds of the Chest, cited by D. N. Eisendrath in Int. Abst. of Surg. **26:** No. 5, abst. from Brit. J. Surg. **5:** 1918.

[7] Rees, W. A., and Hughes, G. S.: Wounds of the Chest as Seen at an Advanced Operating Center, Lancet **1:** 55 (Jan. 12) 1918; abstr. Internat. Abst. Surg. **26:** 421 (May) 1918.

[8] Norris and Landis: Diseases of the Chest, Philadelphia, W. B. Saunders Company, 1918.

[9] Lockwood, A. L., and Nixon, J. A.: War Surgery of Chest, Brit. M. J.; abstr. J. A. M. A. **70:** 734 (March 9) 1918.

Others have noted this heretofore unsuspected sudden recurrence of lung expansion. I quote from the report of the Empyema Commission[1] at Camp Lee: "It has been surprising in several cases to note the remarkable speed with which the cavity has diminished in size or has become obliterated after sterility has been accomplished with Dakin's solution." Homans,[10] reporting a series of cases from the Peter Bent Brigham Hospital, says: "If one follows the healing of an acute empyema both clinically and in a series of stereoscopic plates, one is able to appreciate the steady and apparently resistless effect of these four favorable influences." Among these "favorable influences," he mentions the rise of the diaphragm as being always noteworthy.

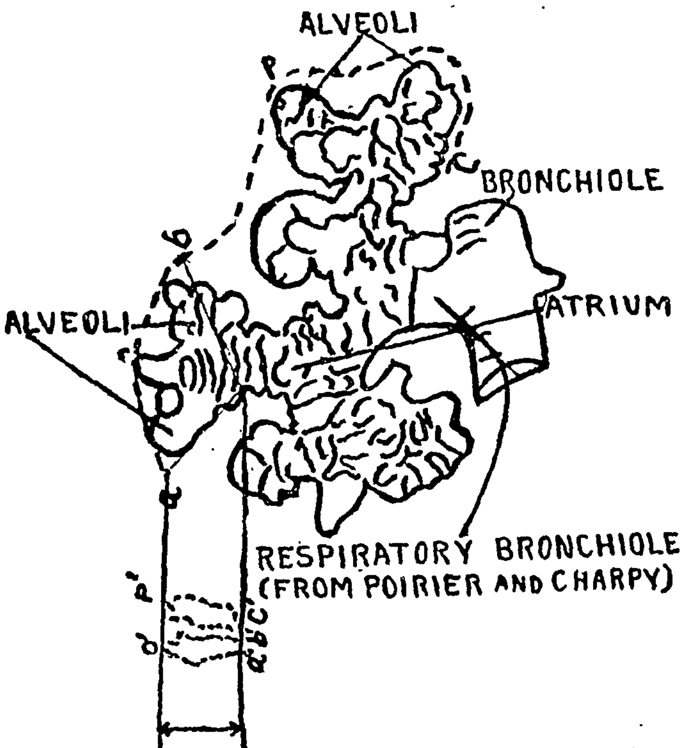

Fig. 1.—Folding of pleura increasing thickness of wall when alveolus is collapsed (copied from Gray's Anatomy). Line *a o b*, representing the pleura, is folded on itself, increasing the thickness of the pleural wall *a' o' b'* as represented in the space indicated by the arrow.

A condition of vast importance in the study of lung expansion is that of double empyema. Last winter I treated two cases of this rare affection:

Case 1.—R. D., aged 19, developed an empyema two weeks after an operation for general peritonitis from ruptured gangrenous appendix. His condition was so bad during the first week of the peritonitis that hypodermoclysis was used very often over every part of both sides of the chest and flanks. His right-sided empyema occurred, whereupon it was drained under a general anesthetic. He did well for several days until he developed dyspnea and fever, and an empyema was discovered on the opposite side. We tried for several days to aspirate the pus from the unopened thorax, but it was a mixed infection of *Streptococcus hemolyticus* and *Bacillus coli*, which produced a thick, flaky pus, rendering our attempts to remove the pus by this means unsuccessful. In spite of all our fears of double pneumothorax, the chest had to be drained, because the patient was gradually but certainly losing ground. All available preparation was made to use suction apparatus in the chest wound; and a lung motor was at hand if necessity should require it. Thoracotomy, under local anesthesia, through a subperiosteal resection of the ninth rib was done, and a drainage tube with a large flange on the pleural and also on the skin side of the thoracic wall secured in the wound without air entering the pleural cavity. The ease with which this is done in the presence of a positive pressure of purulent exudate is the best proof that such a device is quite unnecessary. Respiration was not the least embarrassed but the patient was relieved, and he continued to improve with both pleural cavities open. The double empyema was cured in about two months by simple adequate drainage and without antiseptics of any kind.

Case 2.—F. L., a boy, aged 7, presented a double pyothorax following pneumonia. The entire chest was so crowded by the fluid that it had assumed an extremely rounded shape. About a pint of thick, yellow pus was drawn from both the right and the left side of the chest the first day. This was done through a large trocar and cannula. A soft rubber catheter was slipped through the cannula and the cannula was withdrawn, leaving the catheter in place. The catheter on the right side was allowed to remain open for continuous drainage. A knot was tied in the catheter on the left side because it was feared that air might enter both sides of the chest at once with perhaps very serious results. In about a week the right thorax was opened through a subperiosteal resection of the ninth rib in the scapular line, and adequate drainage was established. Several days later an attempt was made to treat the left side in a similar manner. The roentgenogram showed a dense shadow at the level of the seventh intercostal space and below this point. It was in this space in the scapular line that the catheter had been placed. The resection of the eighth rib proved to be at the lower side of the diaphragm, but not in the peritoneal cavity. The wound was packed with antiseptic gauze and a secondary suture done in a few days, the wound in the meantime being carefully guarded against further contamination. The drainage continued through the small catheter on the left side, and both sides healed in about three months.

In each of these cases of double empyema, a double pneumothorax was established.. It may be supposed that the main pleural cavity was walled off. In the first case cited, either side could be examined with a probe and a space felt between the partially collapsed lung and the diaphragm. The second case proved to have no negative pressure in the chest, but there was a positive pressure sufficient to force pus out through catheters simultaneously from the two thoracic cavities without any suction whatever during the first treatment.

GENERALIZATIONS FROM CLINICAL EVIDENCE IN WAR WOUNDS OF THE CHEST AND IN EMPYEMA

It is more than evident that the theory of respiration which assumes that the lung is merely a passive organ in the process of expansion is inadequate to explain any of the clinical evidence that has been cited. Although negative pressure is, without doubt, one factor in the production of lung expansion in normal life, it is equally certain that the principal force in the production of lung expansion must lie in the automatic expansile power of the lung itself.

Clinical evidence supports the following generalizations:

1. Respiration is reestablished in a collapsed lung only when the movements of the diaphragm are established as rhythmic contractions.
2. The lung expands itself and forces itself into an open, large wound of the chest wall, not seldom and

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10. Homans, John: The Prognosis and Treatment of Empyema, Ann. Surg. 67: 697 (June) 1918.

accidentally, but very often and always in the presence of full atmospheric pressure opposing the protrusion toward the opening in the chest wall, and with the root of the lung pushed further laterally than normal from the open thorax wound.

3. The diaphragm is vital in the production of the respiratory reflex because wounds of the diaphragm if unrepaired always produce death even though the muscle is situated so that its contraction will make an air-tight and water-tight valve which would insure a perfect piston action. The cause must lie in a disruption of its coordinating mechanism similar to fibrillation in the heart muscle.

With this evidence from war wounds of the chest and from the behavior of the lung in recovering from empyema, we have been able to read the process backward and to make the statement that probably every case of empyema is preceded by a collapsed lung to some degree, because the lung always remains in a collapsed state until the diaphragm contracts, the contraction always initiating the respiratory cycle. Therefore, collapse of the lung due to immobilization of the diaphragm from reflex causes, such as an inflamed pleura or a plugged bronchus, and very often plus a lowered threshold of irritability from fatigue or the exhaustion of infection, is the first stage of empyema. The second stage is the pouring out of exudate to fill the dead space about the lung because a living animal organism never tolerates a dead space. This exudate is rapidly loaded with pathogenic bacteria which are present in the lungs and in the pleura before this climax was reached in the demand for physiologic rest. The leukocytes wander out in response to the stimulus of the presence of bacteria, marking the third stage in empyema. Empyema, up to this point, is a defensive process.

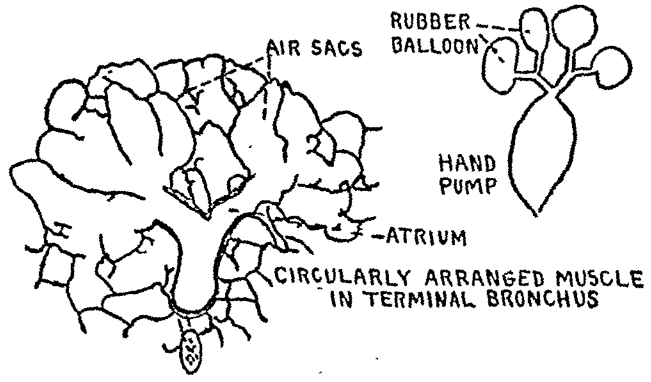

Fig. 2.—Camera lucida tracing of a 2½ year old child's lung (Miller in Bailey's Histology): heavy line, smooth muscle.

I have been delighted to find that the best kind of direct evidence has already been published supporting this conclusion which was derived from circumstantial evidence in the clinical facts already cited. Barjon,[11] chief roentgenologist of the Yale University School of Medicine, who saw this process occur under the fluoroscope, and who also recorded it with roentgenograms, thus describes it:

> It can be shown that paralysis of the diaphragm precedes effusion and that it survives its disappearance. . . . A patient was admitted to the service with a severe stitch in the side which had just appeared during the day. He was radiographed immediately and there was shown on the diseased side a very clear hemothorax; the contour of the diaphragm and the lateral culdesac were perfectly intact and there was no trace of fluid in the pleura. But the diaphragm was completely immobilized and no respiratory movement was seen, while on the opposite side it was very extensive. The next day another examination showed that the effusion was produced in the interval and that it occupied already half the hemothorax. Immobilization of the diaphragm, therefore, precedes effusion; only it is rarely that this fact can be observed, the patients ordinarily being seen only when the effusion is established.

Barjon tells us that the movements of the diaphragm do not cease in hydrothorax from Bright's disease, but that they are retained in spite of the existence of an abundant effusion. It is apparent, therefore, that there is a fourth stage in the development of empyema consisting in the invasion of the diaphragm by micro-organisms from the exudate which continues as long as they are present in the organs above. The presence of virulent bacteria in the lymphatics and the cellular spaces of the diaphragm is a stimulus for an infiltration with lymphocytes and leukocytes, thus permanently sealing and immobilizing it as long as the infection reaches it from the parts adjacent and above. This fourth stage in the development of empyema is also a defensive process.

Early operation in empyema following bronchopneumonia in which the pneumonic process has not subsided is a damaging violation of these natural defensive reactions. The diaphragm is freed from its inflammatory processes, and perhaps in a partially recovered state is stimulated to action by an open pneumothorax, with the inevitable extremes of temperature of air reaching it, as well as from physical and chemical trauma. The one case in our service in the base hospital that came to necropsy illustrates this point. At the time of operation there was a considerable amount of thin, flaky, deeply cloudy exudate about a large, boggy, resistant lung. Convalescence after operation was slow, but the temperature dropped to normal in the course of about ten days and the patient walked about the ward and felt fairly well. The pus from the empyema cavity diminished in amount, and the cavity became smaller by about one half. Suddenly one evening, the patient collapsed and developed a high temperature and rapid pulse. The next day the lung was found to be collapsed considerably more than it had been the few days just preceding the new disaster that had come to him. During the following ten days, this patient developed a general septicemia of hemolyzing streptococcus, endocarditis, glomerular nephritis, and hemorrhages into the meninges. All of these complications were probably due to the rupture of a lung abscess into the blood stream, the postmortem examination of the lung showing several small, unruptured pulmonary abscesses.

The treatment for a case like this suggests itself. The pneumonia should be treated until it has completely subsided without any meddlesome thoracentesis and until the roentgen-ray studies show that the case is ready for definite, radical surgical treatment. Thoracentesis should be done only as a final safeguard to check [illegible] diagnosis. Reports by Major [illegible] hers make it certain that thoracentesis is by no means a harmless procedure. "In explanation of the foregoing order," he says, "it should be emphasized that exploratory tappings and the use of the Potain treatment is not without danger." He mentions one death from exploratory tapping, a number of cases of collapse, and several patients showing bad effects a few hours afterward. The diagnosis having been made both as to the presence of the disease and also as to the stage, which is equally important, the pleural cavity should be drained in a very thorough manner. If the condition of the lung is suggestive of unresolved pneumonia or pulmonary abscess, which cannot be safely evacuated, the lung should be immobilized and not encouraged to expand. Formerly, my idea in every case of empyema was to help the lung to expand by direct exercises causing active respiratory movements. Now, I am convinced that every lung will expand as soon as the lung and its timing-gear, the diaphragm, are in a healthy condition, and sometimes when only the diaphragm is in a fit condition to function. If the disease of these organs is eradicated, there is no fear of the condition becoming chronic, whether there is open pneumothorax or not.

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[11] Barjon, F.: Radio-Diagnosis of Pleuro-Pulmonary Affections, Yale University Press, 1918, p. 21.

[12] Hamburger, W. W., and Myers, L. H.: Pneumonia and Empyema at Camp Zachary Taylor, Ky., J. A. M. A. 70:915 (March 30) 1918.

The method of empyema treatment described by Morelli,[13] and by Bastianelli,[14] is well calculated to accomplish this result. The principle is to free the thoracic cavity of pus, either by good open drainage with the thoracotomy opening stoppered by inflated rubber bags, or by a closed thorax and large needles to aspirate the pus and cleanse with antiseptics. In each case, a positive pressure is maintained for from five to fifteen days or even longer. This idea of immobilizing the acutely diseased lung and pleura is merely an extension of the Forlanini method in the treatment of tuberculosis. It is needless to say that Forlanini's method is one of the real hopeful developments in the treatment of otherwise hopeless cases of tuberculosis, which is evidenced by the fact that as far back as 1913 over 1,000 cases of advanced pulmonary tuberculosis were reported with 40 per cent. symptomatic cures.[15] Now hundreds of cases are reported every year with very encouraging results, showing that a diseased lung recovers more quickly and more certainly if given physiologic rest, so admirably insisted on by Crile[16] as a basic principle in the treatment of infected and traumatic wounds of war.

One of the closed methods of the treatment of empyema, in which the pressure of the infectious bacteria-laden exudate is replaced every two hours with a cold neutral solution of chlorinated soda (Dakin's solution), secures physiologic rest of the lung with very gratifying results in some of the very early cases of the disease in which the bronchopneumonia has not subsided. The effect of the cold is well shown in recent experiments which we have carried out in relation to the cause of expansion and collapse of the lung.

ANIMAL EXPERIMENTATION AS TO THE CAUSE OF LUNG EXPANSION

Dogs were used. The work was done under local anesthesia, with morphin to keep the animal quiet and to diminish shock. Our patients operated on with a local anesthetic were not shocked or made worse in any way as a result of the operation. Collapse of the lung in war wounds and from other reflex causes has occurred. Why, therefore, should not a shockless operation on a healthy dog be done in opening his pleura without causing collapse of the lung, provided the theory of negative pressure in the thorax maintaining normal lung expansion does not hold true? As we shall see, shock is an important factor, but many other elements enter into the very complex mechanism of respiration.

Experiment 1.—A young, full grown dog of medium size was used. The operation was begun at 1:30 p. m. The area of operation was thoroughly infiltrated with 0.5 per cent. procain. A needle connected with a long glass tube was used to test the negative pressure before the pleura was opened. It was arranged to lift a column of water in the tube, but water was drawn into the pleural cavity, and the lung immediately collapsed, as was shown by the laborious breathing and the retraction of the intercostal muscles. The thorax was opened and the lung was found collapsed, and the diaphragm strongly contracted in tetany. Morphin, 2 grains, was given intramuscularly and air kept from rushing into the thorax on inspiration. The thorax was then closed. The opposite side of the pleural cavity was then opened in a similar manner after injecting 10 c.c. of a 0.5 per cent. solution of cocain into the free pleural cavity. The lung at first protruded from the wound on inspiration, but after a brief exposure to the air the diaphragm remained in tetanic contraction and the lung in its regular rhythmic time relaxed and would not contract again until the diaphragm was released from the tetany and resumed its regular rhythmic contractions, which occurred as soon as the opening in the thorax was closed by pressure of a sponge. The finger was now placed in the pleural cavity acting as a valve in the thoracic wound. The lung was observed to expand in proportion to the extent of the diaphragmatic contractions. The finger was purposely removed several times as the diaphragm was beginning to contract. The force of the contraction in this case was very violent in spite of the fact that there was a sudden inrush of air against both lung and diaphragm. The lung expanded so that it protruded from the pleural cavity.

Experiment 2.—The operation was the same as in the first experiment. The pleural cavity was filled with warm physiologic sodium chlorid solution. Respiration was carried on with the lung on the side of the opening in about half collapse. Very little embarrassment of respiration was noted in this condition. The difficulty was in keeping the pleural cavity full of the fluid because inspiration would almost empty it each time.

Experiment 3.—The operation was done the same as in Experiment 1 except that only 1 grain of morphin was given, because the animal was a female and slightly smaller in size. The wrist of a thin rubber glove, the fingers having first been cut off, was sutured to the soft tissues of the wound just below the skin and made water tight. This was filled with physiologic sodium chlorid solution of about the temperature of the animal's blood. When the pleural cavity was overfilled with the solution we had a column of the solution above the pleural opening which would rise and fall with each respiration and which could be kept at any temperature desired. When the fluid about the lung was below the temperature of the blood, the lung would either collapse or expand much less than the volume of the pleural cavity. When the temperature was raised above that of the blood, the lung expanded so that a part of the lobe remained outside of the pleural cavity in the solution in the rubber glove. It would continue this over-expansion at each inspiration and only slight movements of expiration apparently for an indefinite length of time. A cold sponge was held to the outer surface of the rubber glove so that it came close to the lung which was entirely covered with the solution. The lung was very sensitive to the change of temperature and retracted into the chest cavity and would as quickly reappear when the temperature of the water was raised slightly. All this occurred with the pressure of the air outside the lung plus the weight of the column of physiologic sodium chlorid solution about the lung. A hemostat was clamped over the opening in the rubber glove, and the opposite side of the chest was treated in a similar manner. The opposite lung behaved in a similar way with a positive pressure on both sides of the chest.

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[13] Morelli, E.: Treatment of Pyothorax, Policlinico, Rome **24**: 1149 (Sept. 16) 1917.

[14] Bastianelli, Raffeil: Treatment of Chest Wounds, with Special Reference to Pneumothorax, Surg., Gynec. & Obst. **28**: No. 1.

[15] Beggs, W. N.: Induced Pneumothorax in Pulmonary Tuberculosis, Am. Rev. Tuberc. **1**: No. 9.

[16] Crile, G. W.: The Restoration and Repair of Wounds of War, Surg., Gynec. & Obst. **26**: No. 4.

CONCLUSIONS FROM EXPERIMENTAL WORK

1. The extent of lung expansion is in direct proportion to the amplitude of the contractions of the diaphragm.
2. Collapse of the lung is a defensive reflex to preserve the normal temperature of the blood.
3. The first expansile effort on the part of the lung when the thorax is opened is a natural effort to plug the thoracic opening.
4. Both expansion and collapse, as defensive reactions, are merely exaggerated uses of the lung reactions in normal life to meet conditions of changing temperature. The adaptation to higher temperatures in normal life is made by sighing and gasping; temperatures too low call for a lessening of the respiratory movements.

The mechanism of this adaptation may be in the nerve endings of the pleura, or possibly are due to a chilling of the blood itself. It is to be remembered that all the blood in the body passes through the lungs in approximately twenty-three seconds;[17] that the thin walls of the lung constitute an excellent radiator, and that animal life cannot exist if the temperature of the blood is reduced to 68 F.[18] If such a defensive reflex were not possessed by animals, no race could survive in the natural state where the law of tooth and claw and "kultur" holds sway. The mechanism of collapse is of the utmost importance to an organ through which passes all the life blood of the entire body within a single minute. The vessels of the lung possess no other vasoconstrictor mechanism. This reaction occurs very suddenly when the stimulus is extraordinary, such as in the opposite side of the chest from that injured by a gunshot wound. Here the reflex centers are so overwhelmed by the stimuli that they send out vigorous but disorderly responses, causing the uninjured lung to contract violently against an incompressible liquid mass, causing hemorrhagic areas as described by Duval.[2]

A hint as to the mechanism of lung expansion is obtained in the study of the lungs of the new-born child. Up to the time of the first inspiration, the lungs are solid like liver; after the first inspiration the bronchioles obtain their proper shape, and the surface of the lung is studded with a few air vesicles, but the remainder retains its fleshlike appearance.[19] A further study of the condition of the newly born was made by Bouchacourt[20] by means of roentgenograms. He found that if air is forced into the child's month, instead of its having breathed spontaneously, gas is found in the stomach and lungs but not in the apexes.

The structure of the lung suggests the mechanism of its expansile power. Circularly arranged muscle always means contraction of the enclosed lumen of any hollow viscus. The larger bronchioles have this circularly arranged muscular structure, while in the smaller bronchioles it is less marked until the terminal bronchiole is reached; these have a well developed muscularis mucosae, with the blood vessels derived from the bronchial arteries a prominent feature, showing that these muscles really function as contractile tissues rather than as a mere retractile mechanism. An illustration copied from Bailey[21] (Fig. 2) suggests the inflating effect of the contraction of the muscles in the walls of the bronchioles.

Thirty-eight cases of empyema have been under treatment in the base hospital at Camp Upton, during the two and a half months' period from which this report is derived. Many of the cases have been chronic; some have become chronic in this hospital, some from other base hospitals on this side, and some from base hospitals overseas; six cases are the result of gunshot wounds of the chest. One case in which the primary operation was done during the period of this report has become chronic, and one case has ended fatally. The chronic condition was due chiefly to three causes:

1. An unresolved bronchopneumonia from *Streptococcus hemolyticus.*
2. An incision not properly placed.
3. Efforts to secure expansion of the lung at a period when collapse should have been maintained and treatment directed toward sterilizing the pleura and permitting the lung lesions to heal. Dakin's solution has been used in chronic cases to dissolve and cut away diseased and dead tissue and deposits of exudate. Dakin's solution has been used in a few very acute cases in which pressure on the lung and the application of cold are indicated to secure immobilization as well as sterilization. The hypertonic solution of boric and salicylic acid according to the formula of Thiersch has been used in all acute cases with open thorax to remove pus and all foreign material mechanically, to inhibit bacterial growth without injuring a delicate pleura, and to produce a lymph lavage according to the teaching of Sir Almroth Wright. As the solution is warm (110 F.), it is found to be the best possible stimulus for lung expansion.

The theory of respiration which attributes to the lung an active power of expansion independent of a negative pressure in the thorax is the outgrowth of a study of the many open chests exposed to view which served as a direct stimulus for investigation, but it is also based in part on the observations of the many keen-sighted clinicians in the war zone whose records have, to a limited extent, been within our reach.[22]

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[17] Howell: Physiology.

[18] Cocks, G. N.: Experimental Studies of the Various Effects of Atmospheric Conditions Upon the Upper Respiratory Tract, New York State Com. on Ventilation, 1915.

[19] Norris and Landis: Diseases of the Chest, p. 445.

[20] Bouchacourt, cited by Barjon (Footnote 3).

[21] Bailey: Normal Histology.

[22] In addition to the references already given, the following will be found of interest:
Eggers: Gun Shot Injuries of the Lungs, Surg., Gynec. & Obst. **26**: 638 (June) 1918.
Ingraham, C. B.; Roddy, J. A., and Aronson, J. D.: A Study of Empyema Cases at Camp Doniphan, Surg., Gynec. & Obst. **27**: 554 (Dec.) 1918.
Pierry: Review of War Surgery and Medicine, **1**, No. 4, Surgeon General, W. D.

Public Health and Public Welfare in Siam.—Vice Consul Carl C. Hansen at Bangkok reports (*Commerce Reports*, Dec. 27, 1918) that public health and welfare has been advanced during the year in Siam by extending the operation of sanitary regulations to several towns in the provinces. Two American doctors are now in the Siamese sanitary service. Dr. E. M. Barnes, of the International Health Board has successfully cooperated with the Siamese health office in the control of hookworm. American medical men working in the missions, and those doing work among lepers, begun some years ago by Dr. J. W. McKean of the American mission in northern Siam, have received expressions of appreciation by the Siamese government, and contributions toward the expenses of this work have been made during the year.

Clinical Notes, Suggestions, and New Instruments

A CASE OF ACUTE STREPTOCOCCUS MENINGITIS WITH RECOVERY *

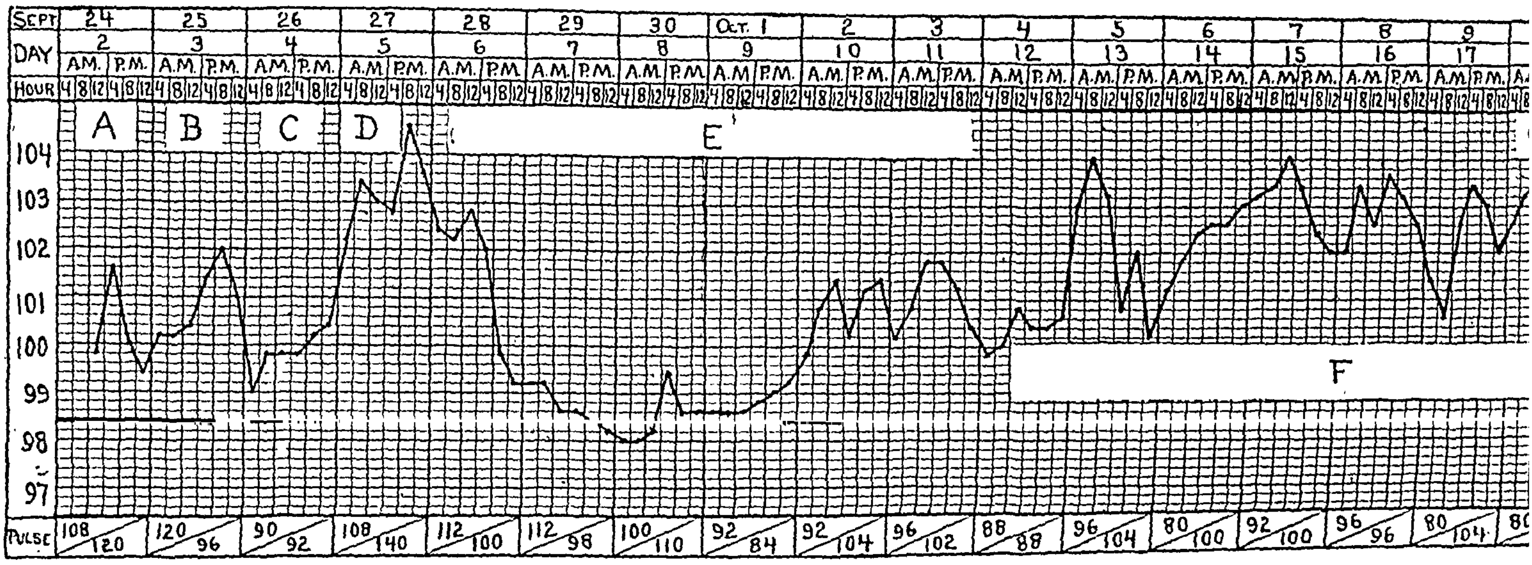
George H. Weaver, M.D., Chicago

This case of meningitis is reported because instances of recovery from streptococcus meningitis are uncommon, and the case presents some other points of interest.

A woman, aged 25, was apparently in perfect health until the afternoon of Sept. 23, 1918, when she became suddenly and violently ill with headache, vomiting, and severe pain in the back of the neck and the back. At midnight a lumbar puncture was made which yielded a turbid fluid containing abundant polymorphonuclear leukocytes. No bacteria were with certainty found in smears. Twenty-seven c.c. of antimeningococcus serum were given intraspinally.

The following morning she entered Durand Hospital. She complained of intense pain in the head, back of the neck and back which was increased when she was moved. There was constant nausea, with occasional vomiting. The neck was rigid. Kernig's sign was positive; her mind was clear. The tonsils had been removed a year before. There was a slight excess of mucus in the nasopharynx, but no acute inflammation. The temperature was 99.8 and the pulse 108. Leukocytes were 10,200, with 87 per cent. of polymorphonuclears. Nothing abnormal was found in the chest or abdomen. Lumbar puncture yielded 25 c.c. of turbid fluid under increased pressure, which contained 2,759 cells per cubic millimeter, most of them being polymorphonuclear leukocytes. No bacteria were recognized in smears, and 20 c.c. of antimeningococcus serum were given intraspinally.

Culture of the spinal fluid on blood agar plates gave a pure growth of small white colonies of a gram-positive streptococcus in moderate numbers. The colonies were surrounded by a narrow semitransparent zone of greenish color after twenty-four hours' growth in the incubator. The organisms were not bile soluble, did not ferment inulin, and were noncapsulated. They were recognized as *Streptococcus viridans*. September 25 and 26, lumbar punctures yielded 30 c.c. of turbid fluids under increased pressure containing about 7,200 cells per cubic millimeter. Abundant colonies of streptococci as described above developed on blood agar plates prepared from the fluids. The patient's condition was more grave, and there was added herpes of the lip, paresis of the right eyelid, and transient hallucinations. The temperature ranged from 99 to 102. September 27, the fifth day of illness, 30 c.c. of turbid fluid under increased pressure were withdrawn, and 21 c.c. of commercial polyvalent antistreptococcus serum were introduced. The temperature during the day ranged from 103 to 104, and the pulse from 108 to 140. During September 28 the temperature gradually fell to 99, and remained between 98 and 99 with a corresponding improvement in pulse, until October 2. October 2 and 3 the temperature ranged from 100 to 101.8, and the pulse from 92 to 104. From September 28 to October 3 there was a severe serum reaction with urticaria. Otherwise the patient was much better and she had little pain. Beginning with October 5 and continuing until October 11, the patient was much worse. There were severe pain in the head and the back, dizziness and blurring of vision, nausea and vomiting, hallucinations, and rambling delirium and a leukocytosis of 10,500. The temperature ranged from 101 to 104, and the pulse from 80 to 112. Lumbar puncture, October 10, obtained 22 c.c. of turbid fluid with 530 cells per cubic millimeter, mostly polymorphonuclear leukocytes. Abundant streptococci were cultivated from the fluid. October 11, a lumbar puncture was made; and after 28 c.c. of turbid fluid under increased pressure had been removed, 22 c.c. of antistreptococcus serum were introduced. During the next twenty-four hours there was a little urticaria, and the temperature fell below normal. From October 12 to October 17, the temperature was between 97 and 99, the pulse 72 to 84, there was very little pain, and the patient was improved in every way.



Temperature chart in case of acute streptococcus meningitis: *A*, lumbar puncture; 25 c.c. turbid fluid; 20 c.c. antimeningococcus serum. *B*, lumbar puncture; 33 c.c. very turbid fluid; 7,200 cells per cubic millimeter. *C*, lumbar puncture; 30 c.c. turbid fluid; *D*, lumbar puncture; 30 c.c. turbid fluid; 21 c.c. antistreptococcus serum. *E*, severe serum reaction with urticaria; otherwise, patient much better; little pain. *F*, return of pain in head and back; dizziness and blurring of vision; nausea and vomiting; hallucinations and rambling delirium. *G*, lumbar puncture; 22 c.c. turbid fluid; 530 cells per cubic millimeter. *H*, lumbar puncture; 28 c.c. turbid fluid; 650 cells per cubic millimeter; 22 c.c. antistreptococcus serum.

Between October 17 and October 22 there were vomiting, blurring of vision, diplopia, and spastic tremor of the eyelids. The eyes were examined by Dr. E. V. L. Brown; the disks were a trifle edematous, but there was no tortuosity of vessels nor other evidence of intracranial pressure The pupils reacted normally. Lumbar puncture, October 18, secured 14 c.c. of turbid fluid with 1,200 cells per cubic millimeter and with a moderate number of streptococci. October 19 and 20, there was violent urticaria. October 21, 25 c.c. of antistreptococcus serum were given intramuscularly. October 23, the temperature fell to 99 and never again rose above normal. From then on the recovery was rapid and complete. Repeated and thorough examinations of the ears, nose and throat by Dr. Robert Sonnenschein failed to detect any condition that might have been the focus of infection primary to the meningitis. It was suspected that the ocular symptoms from October 17 to October 22 were due in part to intracranial disturbances accompanying the serum reaction, of which a severe urticaria, October 19 and 20, was a part.

The improvement that followed each administration of antistreptococcus serum was striking. In cases of streptococcus meningitis, which are usually hopeless, the combined intraspinal and intramuscular administration of antistreptococcus serum would seem to be worth trying. The curative action of antistreptococcus serum depends largely on its opsonic content,[1] as does that of antimeningococcus serum, and the serum should theoretically be useful in such a condition as meningitis, in which it can be brought in direct contact with the bacteria.

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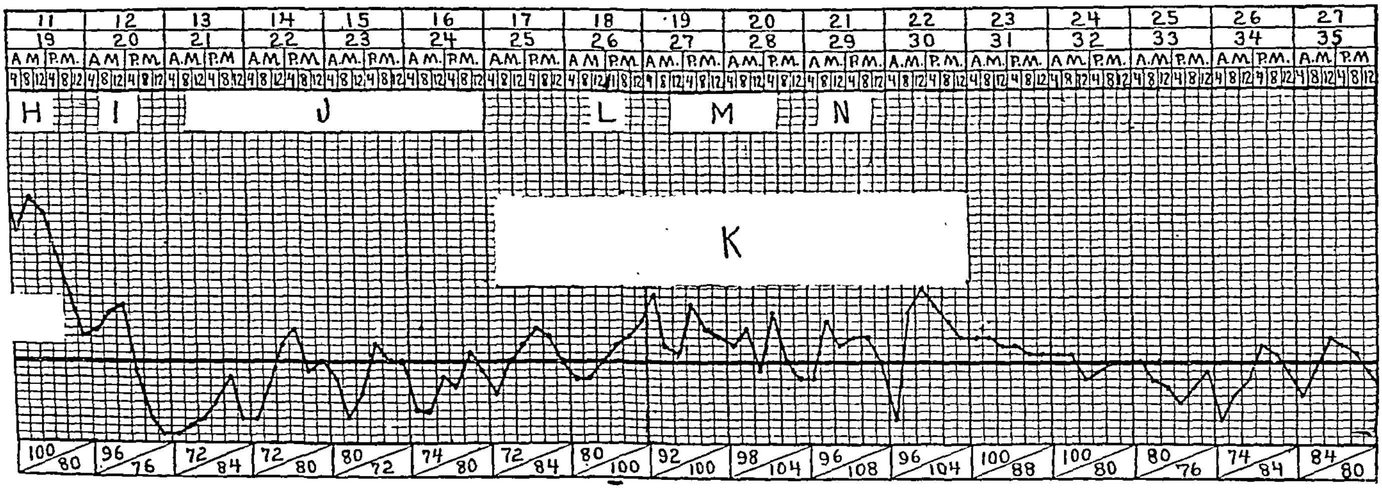
* From the Durand Hospital of the John McCormick Institute for Infectious Diseases.



I, slight urticaria. *J*, little pain; general condition much improved; patient wants to sit up. *K*, vomiting; blurring of vision; diplopia; disks a trifle edematous, but no tortuosity of vessels nor other evidence of intracranial pressure; tremor of eyelids; pupils react normally. *L*, lumbar puncture; 14 c.c. fluid; 1,200 cells per cubic millimeter. *M*, intense urticaria. *N*, 25 c.c. antistreptococcus serum intramuscularly. Respirations the first day were 20, and remained about that rate throughout the illness.

LATENT INFECTION AT THE HILUM FOLLOWING INFLUENZA

Harold S. Arnold, M.D., New Haven, Conn.
Major, M. R. C., U. S. Army

The routine examination of the lungs of a large number of soldiers at Vancouver Barracks, a post where demobilization took place early, and where the epidemic ocurred comparatively late, showed that certain physical signs persisted at the hilum of the lungs for a considerable length of time after apparent recovery from the epidemic disease. A large proportion of these patients showed no symptoms, but occasionally one complained of cough. This finding suggested a careful investigation of the lungs of all patients evincing any symptoms of septic absorption, regardless of whether or not there was anything to suggest lung involvement. The routine examination has demonstrated that findings persist at the hilum either as an accompanying condition or as the cause of lowered resistance in a considerable number of patients. The most frequent complaint is that of prostration. Various myalgias, headache, backache, neuralgias and vague or localized joint pains are usually present; sore throat and cough are almost constant. The symptoms are those associated with some infection or with simple intestinal absorption.

They may abate temporarily after calomel and a saline purge are administered, but will recur. In another class of patients, repeated colds, sore throat or sinus trouble leads to application for a "thorough overhauling."

The character of the cough shows considerable variation, depending on the presence or absence of a general bronchitis or on the condition of the throat rather than on the hilum involvement. If the relaxation of the palate lets the uvula drag, the cough is paroxysmal. It may or may not be productive. Three cases occurred in persons who had undergone long treatment for sinus trouble. The patients felt greater prostration in the late afternoon sometimes accompanied by a rise in temperature.

Examination generally revealed little. The amount of redness of the throats and nasal mucous membranes varied not a little and was not always an index to the amount of subjective discomfort. Edema of the fauces, and particularly of the uvula, seemed far more general.

A superficial examination of the chest will not disclose the lesion. Inspection, palpation and percussion may demonstrate nothing but an occasional slightly increased dulness on either or both sides of the vertebral column above and below the level of the angles of the scapulae. *The findings are determined by auscultation.* The transmission of the voice sounds is usually unaltered, although there is sometimes an increased sense of distance and muffling. The breath sounds follow the same rule. By far the most valuable measure in this, as in cases of tuberculosis, is the employment of expiratory cough. The patient is directed to exhale and to utilize the last remnant of air in a cough sufficient to shake the chest walls, and then to inhale without undue gasping. A shower of moderately fine, sticky râles which seem to burst fairly near the ear is heard with the cough and immediately after.

The treatment by means of drugs is unsatisfactory. Mechanical measures designed to increase the flow of blood locally are of some benefit. Nothing, however, does this better than the daily use of a large, enveloping, old fashioned mustard poultice. The main reliance should be placed on such measures as are of the greatest value in cases of tuberculosis; a properly regulated diet, fresh air and, most important of all, absolute rest of mind and body. If this rest is not obtainable at home, the patient should be sent to a place where it is possible to obtain complete rest while under strict medical supervision.

The symptoms in these cases so resemble in most instances those for which we investigate sinuses, tonsils, teeth and appendixes that the possibility of chronic trouble at the hilum should be borne in mind and an examination of the back made as a routine measure, at least until the epidemic and its after-effects have become a thing of the past.

HEMORRHAGIC DISEASE IN THE NEW-BORN

Arthur D. Kurtz, M.D., Philadelphia

The hemorrhagic diseases of the new-born have always been of marked interest, and it is for this reason that these two cases are reported.

Case 1.—A boy, whose delivery had been normal after a short labor, the fourth child of healthy parents, whose personal and family histories were negative as to hemorrhage, was circumcised seven days after birth, no sutures being used, with no unusual bleeding at the time of operation, the wound being dressed with boric acid and a narrow bandage. The wound began to ooze about fifteen hours after operation, the bleeding coming from no particular point. The usual local hemostatics were used, but without result, so a continuous suture of 00 catgut was used to unite the skin and mucosa. This had no other effect than to cause the stitch holes to ooze. A commercial hemostatic was then used locally, with no effect. Ten c.c. of normal horse serum were then injected into the abdominal wall, and as this produced no result, another 10 c.c. were given about two hours later. This also had no effect, and Dr. William A. Steel was called in consultation. He suggested centrifuging some of the father's blood and injecting the serum, which was done, 15 c.c. being injected. The oozing stopped shortly after, and the child made an uninterrupted recovery. He is now 4 years of age, has had the usual number of cuts and bruises that an active child sustains, and has shown no further evidence of a hemorrhagic tendency.

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[1] Weaver, G. H., and Tunnicliff, Ruth: Further Studies of Antistreptococcus Serum, J. Infect. Dis. 9: 130, 1911.

Case 2.—A girl, the third child of healthy parents with negative family and personal histories, was delivered by a high forceps operation. The eldest child, a girl, has a severe case of icthyosis, and the second child, a boy, has had several minor surgical operations with no unusual bleeding. The patient exhibited no marks from the blades of the forceps except on the right cheek. There was no hemorrhage from the cord after tying. The child nursed and cried normally and showed no untoward symptoms until the third day after delivery, when there appeared on both cheeks the marks of the forceps blades. Within a few hours after these marks appeared, the skin broke down and began to ooze a pinkish serum; on the upper portion of the helix of the right ear, a small point appeared which bled freely. As local hemostatics had no effect, 10 c.c. of normal horse serum were injected in the abdominal wall. Almost immediately the hole where the needle had entered began to ooze, and the navel then started oozing; but no point could be found that could be tied. Sodium citrate enemas were given, as we felt that since the needle holes only made another point to bleed, we could not inject any more serum. The child rapidly sank, and died at noon on the fourth day after delivery. This case is of interest, as hemorrhagic disease is stated to be rather rare in females, the proportion, as stated by Campbell and Kerr, being twelve males to one female.

2520 North Twenty-Second Street.

RETRACTORS MADE WITH HAIRPINS

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In minor surgical operations, when special retractors are not available, ordinary hairpins may be utilized. Such retractors are effective and economical, and may be used in many ways. They can be made self-retaining by placing a weight on the end (Fig. 1 *g* and Fig. 2). In minor operations they are sometimes ideal: they can be widened or narrowed as necessary (Fig. 1 *c, f*) at different steps of an operation. If the incision should be widened, the points of the pin also can be proportionally widened, without resorting to a change of retractors; even in the case of certain operations when large retractors are needed, the pin can be enlarged to advantage and a second pin put between the branches of the one that has been widened (Fig. 2).

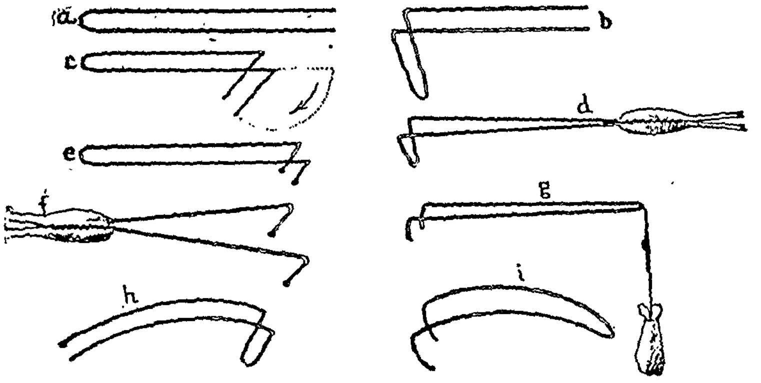

Fig. 1.—Ordinary hairpin (*a*) bent so as to form: *b*, a blunt retractor, and *c*, a hooked retractor; *d*, hairpin hold on artery forceps; *e*, hairpin having small knobs at the end and forming a blunt-pointed retractor; *f*, points more separated so as to form a wider retractor; *g*, self-retaining retractor; *h*, *i*, hairpins bent so as to follow the curve of the body.

Forceps, held by an assistant, may be attached to the side of the pin that is not bent, and by bending either the points or the top of the pin, one can obtain either a hooked or a blunt retractor. If a very strong retractor is required, hairpins used by women to curl the hair should be employed. If sharp pointed retractors are wanted, pins with sharp points are selected; if, on the other hand, blunt pointed retractors are preferred, pins having a small knob are utilized (Fig. 1 *c, f*). All these varieties of pins are easily obtainable at a dry goods store.

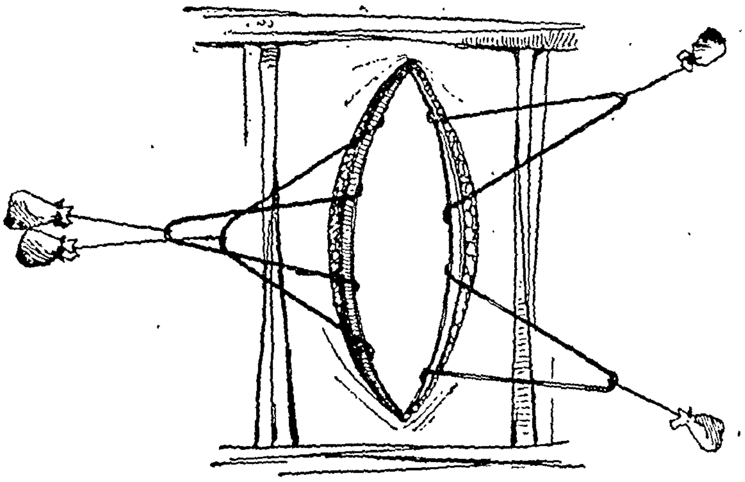

Fig. 2.—Method of applying self-retaining hairpin retractors when a large surface has to be retracted.

A great advantage of using hairpins as retractors is that they can be bent so as to follow the curves of the part on which they are used, so that the retraction can be made without changing the natural position of the tissues that have to be retracted (Fig. 1 *h, i*).

Ospedale Militare Principale.

THE RELATION OF THE PNEUMOCOCCUS TO THE PRODUCTION OF ACID IN FLUID CULTURE MEDIUMS AND THE REACTION OF THE PNEUMONIC LUNG *

Frederick T. Lord, M.D., Boston

The pneumococcus may continue to live in plain bouillon and in calcium carbonate-glucose bouillon for a period of from three to six months. Its viability in glucose bouillon without calcium carbonate is only a few days. The acidity of a 1 per cent. glucose bouillon culture, for example, rises rapidly, as indicated by titration from an initial reading of 0.3 c.c. twentieth-normal sodium hydroxid to 3 c.c. twentieth-normal sodium hydroxid and by colorimeteric determination of the H-ion concentration from an initial reading of from 7.3 to 5.5 with death of the organisms. That an increase in the acidity is to be regarded as an important factor in the death of the organisms is suggested by the fact that the addition of calcium carbonate to the glucose bouillon before implantation of the pneumococcus maintains the life of the culture for a long period, and that after reimplantation of a realkalinized glucose bouillon without calcium carbonate the pneumococcus again grows.

Determination of the H-ion concentration of the press juice of the exudate in lobar pneumonia by the dialysis method showed in three of four human cases a greater degree of acidity in the pneumonic exudate than in the press juice of the other lung used as a control. In the fourth case the H-ion concentration of the pneumonic lung and the other lung was the same.

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* From the Massachusetts General Hospital. Presented at the meeting of the American Society for Clinical Investigation, Washington, D. C., May 8, 1916. Subsequent work on this subject was interrupted by the war. I am indebted to Drs. Porter, Newburgh and Means for some of the material in connection with the experimental pneumonia in dogs.

The pneumonic exudate in experimental Friedländer and pneumococcus pneumonia in dogs was likewise more acid than the press juice of other organs and the blood. In one dog, with experimental pneumococcus pneumonia, the H-ion concentration of one involved lobe was 6.00, and that of another 5.40. From the former, pneumococci were grown in pure culture, but from the latter no growth of pneumococci was obtained.

An increased acidity, indicated by a determination of the H-ion concentration, may be demonstrated also in sputum obtained from patients with lobar pneumonia. It is also found, however, in the purulent sputum from other patients, in empyema pus, and pus from abscesses due to other organisms than the pneumococcus.

The pneumococcus can usually be cultivated from the exudate of lobar pneumonia, even when the acidity is high. Since, however, that part of the lung involved in lobar pneumonia is in a measure isolated from other parts of the body, it is possible to conceive of important local changes of a biochemical nature taking place within it, such as the inhibiting effect of acid production on the growth of the pneumococcus and the favoring influence of increase in acidity on enzymatic action.

305 Beacon Street.

STAINING OF BACTERIA IN TISSUES FOR BACTERIOLOGIC STUDY OF PNEUMONIC FOCI

A MODIFICATION OF METHOD, AS APPLIED ESPECIALLY TO THE PFEIFFER BACILLUS

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There are many rules and directions laid down for the staining of bacteria in tissue, especially when microphages and macrophages are concerned; but the most important requirement is that, while the cell protoplasm shall be moderately bleached, the nuclei and the bacteria shall become and remain plainly visible. Last fall a pandemic of influenza swept over Japan. In investigations undertaken to ascertain the morphology and the incidence of the bacterial phenomena, many of the staining methods did not produce the best results, but with my modification of the carbolfuchsin staining-fluid satisfactory results were achieved.

MODIFIED STAINING METHOD

1. The frozen sections should be cut as thin as possible and glued to the object glass by means of an egg-white glycerin mixture.
2. They should be stained for a period of from ten to twenty minutes in a solution of carbolfuchsin which has been prepared by dissolving 1 c.c. of carbolfuchsin in 10 c.c. of water.
3. The differentiation is accomplished by the use of weakly acidulated warm water (two drops of glacial acetic acid to about 250 c.c. of water). The sections should be left in the solution until they take on a rose-violet hue.
4. The sections are now rinsed in water.
5. They are then dried in the air, no alcohol being used.
6. They are afterward transferred to a xylene bath and are then embedded in a neutral balsam.

FINDINGS

The bacteria are stained all the way from a light to a very dark red. The nucleus takes on a deep red hue, while the protoplasm is almost colorless.

This method is adapted to the staining of any prepared sections in connection with bacteriologic study.

The Perfect Man.—The hygienic ideal continues to be the same as expressed in the Roman proverb, "mens sana in corpore sano," which as interpreted by the Spanish physician Letamendi, means the body of an athlete, the mind of a scholar, and the soul of a saint.

Special Article

HOSPITAL SERVICE IN RURAL COMMUNITIES

A PRELIMINARY REPORT

Prepared by Ernst C. Meyer, Director of the Department of Surveys and Exhibits of the Rockefeller Foundation International Health Board
NEW YORK

(Continued from page 1293)

PART III. SERVICES WHICH SMALL HOSPITALS IN RURAL COMMUNITIES CAN RENDER

Future Rôle.—The essential work of a hospital lies in the field of curative medicine. It is hardly necessary, however, to point out that to care for properly and to cure disease is also to prevent it. In fact, it is not unlikely that when the hospital has found its place of greatest usefulness in the scheme of work for health preservation, its influence as a preventive agency will overshadow even its highly important function in the curative field.

Growing the Hospital from the Hearts of the People.—All experience would seem to point to the fact that a community hospital in order to enjoy its full measure of usefulness must be grown from the hearts of the people whom it is to serve. To do this, public sentiment must as a rule be painstakingly educated. The idea of hospital service is new, and prejudice against it widespread. It is of peculiar interest that this prejudice should be greatest among those who would benefit most by the service. Wherever it was possible, through a tactful, energetic and thorough campaign to coax a community hospital from an originally indifferent, because unknowing public, the benefits have been so evident and so widely enjoyed that the hospital has invariably had warm support and has experienced constantly increasing usefulness.

A hospital is one of those institutions which is peculiarly helpless unless the public comes to it. Those who wish to establish such an institution must seek to find the right way rather than the quick way to do so. Not the grafted hospital—in the form of a private benefaction—but the home grown variety, seems to appeal the most. There is the difference between going after something that is wanted, and receiving something not thought of before. In the first instance, use and enjoyment are immediate and spontaneous. In the second, liking and desire must first be cultivated. It has been found that during this period of cultivation the hospital is apt to go through a stage of hard times both financially and medically.

Aside from these general thoughts, certain advantages of a specific character may be enumerated. They are grouped with respect to their bearing on the patient, the community and the physician.

BENEFIT TO THE PATIENT

A few illustrations of what proper hospital care means in specific types of sickness will serve as an introduction to this rather trite summary of the bright side of the community hospital.

Emergency Cases.—The usefulness of a community hospital is nowhere more apparent than in the emergency or accident cases, in which often the least delay in operating may cause fatal results. The experience of some 150 small hospitals serving largely rural communities in Pennsylvania showed that about 80 per cent. of the cases which came to these hospitals were surgical, and that from 75 to 80 per cent. of the surgical cases were in turn emergency cases. In other words, about 65 per cent. of all cases in these small hospitals fell in the emergency class.[10]

Typhoid.—Hospital care is of immense importance in the care of typhoid. The mortality rate, in the rural regions, in 1910 for this disease was 23.3 per hundred thousand. The stamping out of typhoid is one of the great current tasks of preventive medicine. Its prevalence is well recognized as a serious reflection on any community. Treatment in the hospital will mean better care, quicker discovery of complications, quicker treatment, and better disinfection. Perforation of the intestine, which annually causes 2,500 deaths in this country out of 8,000 cases, could be so handled in hospitals as to save most of this loss of life. In the country a patient with this complication is described as having "no more chance for existence than a snowball in a kettle of boiling water."

Rheumatism.—In vital statistics, rheumatism appears as an apparently insignificant cause of death—7.4 per hundred thousand population. As a matter of fact, it is said that 50 per cent. of the deaths due to organic heart disease (141.5 per hundred thousand, or greater than that of tuberculosis of the lungs, which was 139.7) in 1910 were due to rheumatism. Moreover, numerous deaths reported to be due to other causes are directly traceable to heart failure. Thus, where a case of pneumonia or typhoid is fatal, owing to a crippled heart, the acute disease is usually reported as the cause of death.

Rheumatism is one of the diseases which, it is said, should have "a watchman all the time." The life or future usefulness of a patient may depend on the early detection of heart complications. Rarely, it is said, do patients who live in the country districts and who are suffering from acute rheumatism receive the benefit of hospital care. It is of interest, too, that usually it is difficult to prevail on a patient to provide himself with suitable nursing at home, or even to tolerate watchfulness on the part of a physician.

Pneumonia.—Few diseases need closer watching at certain stages than pneumonia. Judicious and well-timed medication may tide the patient over the crisis to recovery. The cases need careful observation by nurses, and frequent attention from physicians.

Appendicitis.—A famous surgeon has said: "We should have no deaths from appendicitis, but we are having them"—about 8,000 a year for the country. Prompt medical and surgical attention and hospital care are the requisites.

Maternity Care.—One of the great functions which the community hospital may serve is to offer facilities for adequate maternity care, and incidentally to save thousands of lives of mothers and infants. No less than 15,000 mothers died from diseases and accidents incident to childbirth in 1910, and no less than 70,000 deaths occurred from premature birth and diseases peculiar to early infancy. Authorities seem to agree that these deaths are largely preventable. Nor do the cold figures reveal the whole sorrowful story. Gargues has strikingly stated one aspect of this problem: "The poorest, the dirtiest, the most dissolute women are safely confined in a hospital; the richest, the youngest, the purest, and the loveliest sometimes succumb in giving birth to a child at their own homes."

Infectious Diseases in General.—The importance of an isolation ward in a community hospital is obvious. Failure properly to isolate a patient may result in an entire community's becoming infected. In no case is the need of a hospital more apparent.

Advantages of Good Medical Care.—Patients treated in a properly equipped local hospital generally are assured of good medical care. They are in the hands of trained nurses and subject to constant supervision—important in many diseases of a fluctuating character. The hospital always furnishes appliances superior to those that can be obtained in the best home. It should be in a position to meet any unforeseen developments that may arise.

Suitable Food and Surroundings.—In many cases the patient cannot at home be provided with proper food which, even if prepared by a trained nurse, is not likely to come up to hospital requirements, where the diet is a departmental matter. The general accommodations, moreover, and quiet surroundings are another factor which greatly contributes to the speedy convalesence of a hospital-treated patient.

Better Air.—Although this may not apply to the wealthier members of the community, the poor patients certainly breathe purer air in the hospital than at home. Besides being spaciously constructed, the hospital usually occupies an isolated position, surrounded by trees, and provided with open-air verandas and balconies where patients may enjoy the full benefits of convalescence.

Family Relieved of Care of Patient.—The fact that the burden of responsibility in caring for the patient is shifted from the family—usually poor and hard-working—to the hospital has a salutary effect both on the patient and his family, and by reducing the inevitable worry which accompanies all sickness, facilitates a more speedy recovery.

Reduction of Expenditure.—Another recommendation in the eyes of the poor is the fact that while receiving better care, their expenses are lowered by being treated in the hospital; the indigent poor are, of course, relieved of all financial obligations.

Educational Work.—While in the hospital a patient acquires the fundamentals of healthy living and medical care. On his return home he is more competent to look after himself and his family.

Advantages of Community Hospital over City Hospital.—In many cases the needs of a country patient can be successfully met by the city hospital, where he is furthermore assured of receiving the best attention. Very often, however, the distant hospital is unable to be of any assistance, and the simpler, less highly organized service of the local hospital can alone avail. The following are the main advantages of the community hospital over the city hospital:

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[10] This fact only serves to emphasize the tragedy of hospital service in rural communities in Pennsylvania. According to the published reports of the state, 75 per cent. of these hospitals are "incompletely equipped and grossly mismanaged."

Avoidance of Transportation: In some cases a patient would suffer very severely through delay in transportation to a city. This is especially true in surgical cases. In remote country districts, moreover, the facilities for transportation are either entirely lacking or are exceedingly primitive in character. Often the patient has to be taken for 50 or 60 miles over rough roads in a poor conveyance. The presence of a hospital in the immediate community would eliminate this difficulty.

Expense: Both the distance of transportation and the superior equipment offered by a city hospital make it more expensive than the rural hospital. For the majority of country people this is a factor of importance.

Follow-Up Work: Very often it is highly important that a case be followed up after the patient is discharged. He may be too ignorant to care for himself, or his case may need constant supervision at the hands of the physician who has treated him. This can be carried out effectively only if the patient lives in the same locality in which the hospital is situated. The work of the visiting nurse is furthermore a great factor in educating the patient in everything pertaining to his physical well-being.

Individual Attention: Although from a medical point of view this may be a minor consideration, nevertheless from the subjective view of the sick patient the local hospital offers large advantages over the city institution, in that he is much more likely to be treated as a human being instead of as a mere "case." He enters into personal relations with the hospital staff who, he feels, are anxious to see him recover. And he is apt to leave the hospital full of gratitude and affection, this sentiment being quickly communicated to his family and neighbors. Too often the very opposite is true of the large city hospitals, even when the patient may have received the best professional care. The importance of this psychologic factor is happily becoming more widely recognized.

BENEFIT TO THE COMMUNITY

Community Responsibility.—The possession of a local hospital tends to arouse a community to a sense of its responsibility toward its sick. The public is too much inclined to rely on public charity and occasional donations to relieve it of this burden. It should be made to realize that the sick need its continuous support just as much as does any other department of public service, and that by looking after its sick it is serving its own immediate interests.

Educational Value.—The hospital, being in close touch with the people, can do effective work in educating the people in matters pertaining to healthful living. Every patient who enters a hospital is taught the elements of right living and of medical self-help. The lessons thus learned are spread throughout the community.

Reduction in Mortality and Morbidity.—Many deaths are averted through more prompt and adequate medical assistance furnished by the hospital. General health education increases healthful living. Communities owning rural hospitals have experienced a reduction in mortality and morbidity.

Cooperation in Public Health.—The hospital can be made an active collaborator of the public health department. It may serve as an intermediary between it and the community at large, with which it is in intimate touch. Through a well-developed system of visiting nurses it will be able not only to care for its patients but also to carry on a very active educational propaganda in the interests of sanitation and the control of epidemics. Thus results can be accomplished which quantities of leaflets spread among a population including the illiterate and ignorant cannot possibly effect.

Branch Laboratory.—The community hospital, if it is equipped with a laboratory, as it should be, both pathologic and bacteriologic, might develop into an important branch of the state laboratory service, where diagnostic work may be quickly done. Time, in many instances, is a vital factor in preventive health work. Specimens may likewise, when necessary, be forwarded to the state laboratory in prescribed form. The local laboratory may naturally also become a seat for more or less stimulating and practical research work.

BENEFIT TO THE MEDICAL PROFESSION

Hospital as Meeting Place.—The local hospital can serve as a center where the physicians of the community may gather, exchange opinions, and familiarize themselves with the latest advances in medical and hospital methods. It stimulates healthy competition and eliminates the rivalries and misunderstandings which too often result from isolated activity.

Stimulates Study.—Altogether too frequently it happens that a physician relegated to a rural district becomes a fossil. Unless animated by high ambition he may be inclined to let himself drop to the level of his surroundings, and not being subject to supervision, and usually inadequately paid, he tends to relax his standards. The presence of a community hospital acts as a very potent spur to a country practitioner's activities, and usually prompts him to endeavor to keep abreast of the times by taking postgraduate courses in medicine and in other ways. This desire is further stimulated if the hospital offers him the advantage of an up-to-date medical library.

Increases Efficiency.—The hospital greatly increases a physician's ability to render efficient service in accordance with modern standards. Proper facilities, especially in surgical cases, are not available in the ordinary country home. Usually a physician cannot maintain his own hospital. The community hospital provides a place to which he can bring surgical and other cases which need constant supervision, and which in the absence of a hospital he often must take to his own home. The presence of a hospital also lessens the physician's chance of contracting an infection, and saves both time and money.

Tends to Elevate Moral Standards.—Hospital practice is apt to discover and expose crime and graft in the form of unnecessary operations, wrong diagnosis for the sake of prolonging treatment, unwarranted division of fees, etc. It has been suggested that under such conditions great surgeons will become greater, and good physicians and surgeons better; that the poor, careless, indifferent few who endanger society, and who are the curse of reputable medical men, will be driven out of the profession.

(To be continued)

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SATURDAY, MAY 10, 1919

THE MEDICAL MANUAL OF THE AIR SERVICE

When the history of the great war through which the United States has just passed is fully recorded, the influence of the unusual problems, suddenly created by the requirements of the fighting forces, on the progress of scientific study will become conspicuous. One need not go beyond the medical and closely related sciences to realize the significance of this statement. Feeding an army of millions instead of thousands of persons raised anew many questions of food and nutrition which had either been overlooked or complacently disregarded under the ancient regimen. The importance of avoiding waste loomed larger than ever before at a time when we were being exhorted to conserve food to the utmost and to use substitutes so that those less able to do without certain food products might share our surplus in larger measure. Sanitary science and practical hygiene were confronted with new difficulties in the creation of great cantonments and camps, and the introduction of new modes of warfare, such as trench fighting. Water supply and sewage disposal required suitable provision on an enormous scale, often in places presenting unanticipated difficulties. Accordingly, the organization of a large sanitary corps, the initiation of a food division, the introduction of the designation "nutrition officer," are illustrations of a few of the innovations created by the novel needs of the times.

In medical fields the almost revolutionary changes in methods and principles of diagnostic, therapeutic and prophylactic procedure are still too new to leave the impression of importance which some of their unique aspects deserve. It was a platitude that, in war, more men die of disease than by bullets; but just as the implements of war change in successive generations, so the incidence of army maladies varies in different places and seasons. No sooner had the prophylactic conquest of typhoid, once a dreaded sourge, relieved the army command of one enormous danger, than typhus, trench fever, meningitis, pneumonia and influenza came on the scene in unanticipated ways and with unexpected virulence. Other omnipresent deteriorating forces, like the venereal diseases, adopted unsuspected modes of insidious attack calling for the utmost resourcefulness to prevent serious human disaster. The ravage caused by the war gases presented absolute novelties of pressing necessity to the medical fraternity, bringing it face to face, literally overnight, with pathologic manifestations never encountered before.

The fruitfulness of medical research in the solution, partial or complete, of the seemingly innumerable new difficulties that have confronted it in the past two or three years has manifested itself in so many abiding ways that it is not easy to select the most representative examples. Despite the perennial interest that centers in such topics as shock, infectious disease or plastic surgery, they do not possess the temporarily popular fascination which the novel experiences of gas warfare or aviation present as scientific curiosities. Medical studies in aviation have more than merely military value: they involve matters likewise of economic and human import. Colonel Wilmer, who has been the officer in charge of the Medical Research Laboratory of the Air Service at Mineola, L. I., has forcefully indicated the point of view emphasized by war time needs. Though the principles of aeronautics, he writes,[1] were clearly enunciated by Samuel Johnson 159 years ago in his "Rasselas, Prince of Abyssinia," it was not until within the last decade that air flights began to be practical. During these years, infinite time and thought have been spent on the machine. The pitch of the screw, the angle of attack, the stream line, the admixture of gasoline and air, etc., have all been studied with mathematical accuracy. But the value of the human machine, Wilmer adds, is just beginning to be properly recognized. A slack control wire is not more dangerous than a weak eye muscle; a poor mixture of gas and air is not more serious than a flier with poor adaptive respiration. And a poor compression in the cylinder is not of such vital consequence as a weak heart muscle.

The new air service has thus been faced with the physiologic problem of determining the conditions which may affect the efficiency of the aviator, and the medical problem of protecting him against the effects of altitude, low barometric pressure, and deficiency of oxygen. Some of the timely contributions from the newly created laboratory have already been reviewed in The Journal.[2] More recently the government has issued a manual of the Medical Research Laboratory[1] from the Division of Military Aeronautics in the War Department. It is the result of the work done in the well equipped laboratory at Mineola, and is intended for the information and instruction of those who are interested in the medical problems of aviation. In addition to an illuminating discussion of the physiology of altitude which concerns the mountain climber as well as the air pilot, the peculiar concern of psychology, otology, ophthalmology and psychiatry in the conditions involved in flying is interpreted.

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[1] Manual of Medical Research Laboratory, War Department, Air Service, Division of Military Aeronautics, Washington, D. C., 1918, p. 5.

[2] Medical Studies in Aviation, J. A. M. A. **71**: 1382 (Oct. 26) 1918. Medical Aspects of Aviation, editorial, ibid. p. 1408.

Few persons not primarily accustomed to think of the factors involved in human efficiency realize what individual physical fitness really means. Why do we read of so many "ologies" in relation to the aviator? The ability to endure comfortably and well high altitudes, the government manual tells us, is dependent on the ease and quickness with which the adaptive responses in the breathing, the blood and the circulation take place. In persons damaged by disease, overwork or unhygienic living, or weakened by inactivity and by loss of sleep, the power of adjustment is as a rule below par. The normal equilibrium of the body is so nicely adjusted that under usual conditions the physiologic balance is largely maintained by adjustments that are made with little or no expenditure of energy.

There is a certain range of greater or less breadth through which the external factors of the environment may be varied and yet be met by an automatic adjustment of the physiologic processes in the body which will preserve the vital balance of the mechanism. The eyes, ears, cardiovascular mechanism and nervous system play a part in these adjustments. Until the effects of the airman's activities and environment on the functions of different organs are accurately known, the health and the efficiency of the aviator cannot be completely safeguarded. The new manual is a sign of the stamina of American men of science acting in united effort under the spur of a great need.

HAND-BORNE INFECTIONS

It is easy for the absent-minded, as well as for the ignorant person, to transfer germs from contaminated hands to the mouth. Objects touched by fingers just moistened with saliva are a part of the everyday environment of many persons in modern life. Telephone directories consulted with freshly dampened thumbs, saliva-moistened street-car transfers, and hands offered for the ceremonial shaking after being used for smothering the droplets of a cough are but a few of the multitude of opportunities for acquiring germs fresh from the respiratory tracts of friends, acquaintances and strangers. Others will be recalled by every observant city dweller. Opportunities, indeed, for hand-soiling of even more unpleasant character are not far to seek.

The chances for hand contamination during an active day are extraordinarily numerous. Palmer[1] has recently enumerated his chances for acquiring infection of this sort; they amounted to 119 points of contact. The majority of them were instances of hand contact with doorknobs and similar objects that were or might have been touched by others immediately before. Many active men would probably go far beyond such numbers in counting over their own possible daily chances for hand contamination. It is safe to say that the average professional man or office worker in the "down town" or "business" district of a city takes advantage in the course of a day of several hundred opportunities for picking up germs of various kinds recently deposited by the hands of others. Under special conditions, this form of indirect contact has been thought to be a potent factor in definite epidemics of diseases. Lynch and Cumming[2] have advanced evidence which is interesting, if not altogether convincing, in support of the view that contaminated hands were an important agency in spreading influenza in certain army organizations during the great 1918 pandemic. The hands of typhoid carriers have for a long time been regarded with well merited suspicion.

There are two aspects of hand-borne infection that deserve special recognition. One is the fact that early education of the reflexes can protect the individual to a large extent against the grosser forms of this mode of infection. It is glaringly obvious that the biting of finger-nails, the moistening of fingers in turning the pages of a book, and similar half unconscious acts greatly enhance the opportunities for planting undesirable germs where they can multiply. On the fingers they may be harmless; transferred to the mouth they have a wide field for development. It is plain, too, that hand washing before meals constitutes a safeguard against infection. The soiling of the hands is impossible to avoid altogether, but the swallowing of germs from one's own soiled hands is largely under individual control. A reasonable degree of education in such matters in the home and in the school will go a long way toward minimizing the dangers of hand-borne infection.

Another aspect is the evident absence of any ground for extreme apprehension or for the building up of a phobia. Every normal, active person must receive on his hands hundreds of times a day germs derived from other human beings, and yet apparently infection from this source is relatively uncommon. In proportion to the chances for hand contamination, adult infection is certainly a rare occurrence. Undoubtedly in children of school age and younger this route of infection is more commonly followed; but two additional factors are at work in the latter case; the greater susceptibility of children to the common infections whose portal is the mouth or the nose, and the more unconventional habits of children with respect to cleanliness of hands and familiarity of intercourse between fingers and mouth. Even with children, however, it is difficult to apportion the relative responsibility of hand-borne infection and droplet infection.

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[1] Palmer: Am. J. Pub. Health 9:267 (April) 1919.

[2] Lynch and Cumming: J. Am. Pub. Health Assn. p. 1919.

So far as adults are concerned, the proportion of cases of hand-borne infection to the opportunities for such infection seem almost surprisingly small. It may be fairly assumed that the most useful safeguards against this form of disease transmission are to be found in such practices as hand-washing and in refraining from using the tongue or the lips as a moistening-pad, rather than in hysterical attempts at avoidance of all hand contamination. Children are best protected through the inculcation of similar desirable habits at an early age. In a word, some degree of hand contamination is unavoidable; but the transference of the contaminating germs to the mouth is largely under individual control and is subject to the powerful influence of early formed habit.

FOOD AND THE CONTROL OF BACTERIA IN THE INTESTINE

The alimentary tract of man has been designated as a graveyard for bacteria. No less than from 5 to 8 grams of them, dead for the most part, are excreted every day with the feces. One need not debate whether these micro-organisms are in general beneficent or detrimental to the body. Certainly at times some of them, at least, produce more harm than good. Early in the history of modern alimentary bacteriology the attempt was frequently made to devise some procedure for sterilizing the gastro-intestinal tract by destroying those bacteria which escape the germicidal bath of the acid gastric juice. The efforts resulted in failure. Such substances as might have been effective bactericides were as a rule so detrimental to the human host that it became a choice between survival of both the latter and his invader or the simultaneous destruction of the two.

Subsequently it became apparent that the intestine may be the location of quite different types of bacteria. One group, which may be designated as the putrefactive class, thrives particularly in the large intestine, where the reaction is not unfavorable. Where the second group, the fermentative bacteria, thrives, acid conditions are likely to arise which inhibit the growth of the putrefactive micro-organisms. Still other varieties like *B. coli,* are adjustable to varied conditions of environment. Herter and Kendall[1] were the first to emphasize the correlation between the types of bacteria found in the intestine and the composition of the ingested food. According to them, in the absence of carbohydrates in the diet the proteolytic bacteria predominate, so that the fecal discharges give evidence of the products of the putrefactive changes brought about by them.

Other American bacteriologists have also recorded the transforming influence exerted by certain foodstuffs on the intestinal flora. For example, Torrey[2] observed the peculiar effects of high-calory diets on the fecal micro-organisms of typhoid patients. The food fuel in such cases contains an unusual quantity of lactose, amounting at times to 250 grams and upward. On such a regimen there resulted a transformation of the ordinary type of flora to one strongly dominated by *Bacillus acidophilus.* More recently, at the Cornell University Medical College, New York, Torrey[3] has demonstrated anew, by experiments on dogs, that the chemical character of the food ingested is the factor controlling the types of bacteria vegetating in the alimentary tract. It does not follow, however, that all carbohydrates have an equal tendency to establish a purely fermentative intestinal flora; nor do all protein foods encourage putrefactive conditions in like degree. Torrey observed that two carbohydrates, lactose and dextrin, added to a diet of meat and rice, caused such a marked development of aciduric bacteria of the *Bacillus acidophilus* type that they completely dominated the fecal flora and effected the almost complete suppression of proteolytic types, even including *B. coli,* commonly found in the dog's intestinal tract. Glucose exercised no transforming influence; and maltose and sucrose caused at most only a minor alteration in the direction referred to. Whether this is due to a slower absorption of lactose so that it can act as a bacterial medium, owing to a longer sojourn in the lumen of the intestine, is not determined. At any rate, the results are more than transitory: they persist as long as the special diet is continued.

Starchy foods also tended to effect a simplification of the intestinal flora and an elimination of the obligate putrefactive bacteria. Protein foods produced decidedly unlike effects, so far as the encouragement of putrefactive organisms is concerned. Thus, milk casein in the diet exhibited far less tendency to give rise to putrefaction than did meat protein—a fact long since recognized on the basis of chemical examination of the urine for evidences of absorbed decomposition products. Fats in the diet seem in general to be without determining influence. Torrey announces that vegetable proteins stand in strong contrast to proteins of animal origin, and meat in particular, in that they do not offer encouragement to the growth of intestinal putrefactive types of bacteria. We shall expect our vegetarian friends to disseminate this fact widely in their always vigorous admonitions against the "dangers" of meat, now that the "uric acid poison" proclamations are no longer so effective as formerly. We shall not participate at this moment in the debate of bread and milk versus meat and potatoes. For the present it is gratifying enough to know that where antiseptics fail to produce desired results, as in the hidden recesses of the bowel, diet may prove to be an unexpectedly potent factor in the purposeful restraint of undesirable inhabitants.

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[1] Herter, C. A., and Kendall, A. I.: J. Biol. Chem. 7: 203, 1910.

[2] Torrey, J. C.: J. Infect. Dis. 16: 72, 1915.

[3] Torrey, J. C.: The Regulation of the Intestinal Flora of Dogs Through Diet, J. M. Res. 39: 415, 1919.

THE EPIDEMIOLOGY OF POLIOMYELITIS

The increasing knowledge of the distribution of the micro-organisms that are the etiologic agents in the occurrence of several epidemic diseases has focused attention on the prevalence of carriers, formerly unsuspected as factors of danger to the environment in which they exist. The demonstration that apparently healthy persons may harbor bacteria of a pathogenic sort is now accepted universally in the case of the organisms responsible for typhoid fever and diphtheria. Healthy carriers are by no means always immune to the germs which they innocently harbor, as the experience with hemolytic streptococci, responsible for the secondary infections following in the wake of scarlet fever, measles, smallpox and influenza, clearly indicates.[1]

It is not doubted at present that there are healthy carriers of the virus of poliomyelitis, regarding the epidemiology of which much remains to be ascertained. The virus has been detected in the secretions of the nasopharynx not only during the period of attack by the disease but also in healthy persons who have been in contact with cases of poliomyelitis.[2] Obviously an intelligent method of control of the spread of an epidemic presupposes dependable information regarding the distribution of the etiologic agent. Swedish observers[3] have championed the view that chronic carriage of the virus of poliomyelitis is common; but the painstaking critical and experimental studies just reported from the Laboratories of the Rockefeller Institute for Medical Research by Flexner and Amoss[4] are not in accord with this conclusion. Their deductions are to the effect that the virus is regularly present in the nasopharynx in cases of poliomyelitis in the first days of illness, and especially in fatal cases; that it diminishes relatively quickly as the disease progresses, except in rare instances; and that it is unusual for a carrier state to be developed. Hence the period of greatest infectivity of patients would appear to be early in the disease, which is probably the time at which communication of the virus from person to person takes place.

The American investigators adduce, in support of their conclusion, the observation that the communicability of poliomyelitis during the wide epidemic in this country in the summer and autumn of 1916 was a phenomenon chiefly of the early stages, while the frankly paralyzed person and the convalescent were to be feared much less. Correspondingly, at the Rockefeller Institute experimental infection was secured with tissues obtained during the first week, approximately, of the disease, but not at later periods. It seems unlikely, therefore, that healthy and chronic carriers of the virus are numerous. In any event, preventive measures against the spread of epidemic poliomyelitis should unquestionably be centered on the actual patients and particularly early in the course of their infection.

Current Comment

CONSTITUTIONALITY OF HARRISON NARCOTIC DRUG ACT UPHELD BY SUPREME COURT

The United States Supreme Court has decided that the Harrison Narcotic Drug Act is constitutional. The exact status of this law has been a matter of discussion since its passage. While it had been variously interpreted by United States district and appellate courts, its constitutionality had never been passed on by the United States Supreme Court. In two decisions, involving practically the same points, the Federal Supreme Court holds the act constitutional and rejects the claim that it is an invasion of the police power reserved to the states. In the first case, United States vs. Doremus, the district court of the western district of Texas held the act unconstitutional on the ground that it was not a revenue measure and was an invasion of the police power of the states. The evidence shows that Doremus, a physician who was duly registered and who had paid the tax required by the act, sold to a patient, a morphin habitué, 500 one-sixth grain tablets of heroin, the sale not being in pursuance of a written order on one of the forms furnished by the Internal Revenue Department. The court says that the Harrison law was passed under article 1, section 8, of the constitution, which gives congress the power to lay and collect taxes for the general welfare, and that the only limitation placed on the power of congress is that such taxes must be uniform. To this limitation the Supreme Court declares that it cannot add others. Subject to such limitation, congress may select the subjects of taxation and may exercise the power conferred at its discretion. The fact that other motives may impel the exercise of federal taxing power does not authorize the courts to inquire into that subject. If the legislation enacted has some reasonable relation to the exercise of the taxing authority conferred by the constitution, it cannot be invalidated because of the supposed motives which induced it. Nor is it sufficient to invalidate the taxing authority given to congress by the constitution that the same business may be regulated by the police power of the state. An act may not be declared unconstitutional because its effect may be to accomplish another purpose as well as the raising of revenue. If the legislation is within the taxing authority of congress, that is sufficient to sustain it. This means that so long as an act is in proper form as a tax measure, congress may regulate anything that it may desire through its tax-levying power without regard to whether the subject is one that may be regulated by the states or whether the real object of the act may be reformatory or restrictive rather than revenue producing. So long as the law is a tax-levying law in proper form, the courts will not go into the motive for which the act was passed. Evidently this decision represents the opinion of a bare majority of the court, since it is signed by only five justices, the chief justice and three other members of the court dissenting and holding that the district court correctly held the act to be beyond the constitutional power of congress in that it was an attempt by congress to assert a power not delegated, that is, the reserved police power of the states. Chief Justice White and Justices McKenna, Van Devanter and McReynolds, the dissenting justices, evidently regard the Harrison act as an invasion of the police power of the states and not a proper subject for federal legislation. The decision was written by Mr. Justice Holmes, and the justices concurring are Day, Pitney, Brandeis and Clarke. The second case, Webb and Goldbaum versus the United States, involves the same issue. On this, as on the previous decision, the court was divided five to four.

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[1] Hemolytic Streptococci and the Tonsils, editorial, J. A. M. A. **72**: 1295 (May 3) 1919.

[2] Flexner, Simon; Clark, P. F., and Fraser, F. R.: Epidemic Poliomyelitis, J. A. M. A. **60**: 201 (Jan. 18) 1913. Kling, C., and Pettersson, H.: Deutsch. med. Wchnschr. **40**: 320, 1914. Taylor, E., and Amoss, H. L.: J. Exper. Med. **26**: 745 (Nov.) 1917.

[3] Kling, C.; Pettersson, A., and Wernstedt, W.: Communications Sweden State Med. Inst., Stockholm **3**: 4, 1912.

[4] Flexner, Simon, and Amoss, H. L.: Persistence of the Virus of Poliomyelitis in the Nasopharynx, J. Exper. Med. **29**: 379 (April) 1919.

VICTORY WEEK IN ATLANTIC CITY

The Chicago session of the American Medical Associaton was called a war meeting. The Atlantic City session will also be a war meeting, but with a very different point of view from that of last year. This is to be a VICTORY MEETING. War is an expensive but a practical teacher. In its crucible medical science has been put to the test and vital knowledge evolved. The therapeutics and diagnostic methods of peace times are, in war's stern trial, stripped of their fripperies and fringes, and proven facts and true scientific knowledge take their place. The VICTORY MEETING of the Association will be largely devoted to the presentation of what science has gained and what facts have been gleaned in the war. Necessarily, as was the meeting last year, this VICTORY MEETING must be more or less international in character, hence invitations have been sent to foreign governments to send representatives to be present and to contribute their knowledge to this vast symposium. A prominent feature will be the application to industrial life of those war methods which are particularly applicable because they deal with the handling of large bodies of men under control, and because they deal with injuries which are duplicated by those in industrial life. Then, too, this VICTORY MEETING will offer one of the first real opportunities for a study of the havoc wrought by the influenza epidemic and the means for combating future scourges of similar character. By June ninth many medical officers—perhaps more than 20,000—will have been released from military service. Thus there will be the opportunity to meet and greet the friends of military life and to reminisce over the stirring trials of war times, whether in camp, in field service, in the laboratory or in the administrative offices. It is not too much to say that the victory meeting will be an epoch making session. In view of the important and serious discussions to take place, the Fellows of the Association are especially to be congratulated that the meeting occurs in Atlantic City where ocean breezes, balmy sunshine and invigorating and soothing ocean baths keep the mental faculties eternally fresh.

HELPFUL HINTS FOR BUSY DOCTORS

A comparatively recent issue of the *International Journal of Surgery* had an editorial on "The Questionable Etiology of the Present Epidemic." The editorial, which occupied nearly two columns, was signed "G. H. Sherman, M.D." and its sum and substance was to the effect that one can best immunize against influenza by using "a combined vaccine containing the influenza bacillus, pneumococci, streptococci, the micrococcus catarrhalis and staphylococci." In the advertising pages of the same issue was a half-page advertisement of "Influenza Vaccine No. 38" which "Will abort Colds, Grippe, Influenza and Pneumonia" and which is made by "G. H. Sherman, M.D." This vaccine contains the various bacilli and cocci mentioned in the G. H. Sherman, M.D., editorial. In the good old days, some medical journals published editorials puffing proprietary remedies. Then, however, the editorials were unsigned, being rewritten by the editor from material furnished by the advertiser. Twentieth century efficiency has improved on the old re-write method. One wonders whether in coming issues of the *International Journal of Surgery,* one may look for an editorial by Bell & Co. (which also carries a half-page advertisement) on "The Questionable Etiology of Sick Headache," which we learn from the advertising pages "is quickly and surely relieved by six Bell-ans in a glass of hot water." Or possibly one may find "The Questionable Etiology of Chronic Intestinal Stasis" discussed editorially by the French Lick Springs Hotel Co., who surely should be accorded two columns of editorial space, as they carry two quarter-page advertisements of "Pluto." A four-page editorial is rightly due the Etna Chemical Co. for its full-page advertisement of "Phenalgin," and it should not be difficult to use that amount of space in discussing "The Questionable Etiology of Pain." Interesting editorial subjects suggest themselves as one reads the advertisements of "Sal Hepatica," "Ergoapiol," "Pond's Extract," "Micajah's Suppositories," "Tongoline," "Bromidia," "Campho-Phenique," "Sanmetto," "Pepto-Mangan," and many, many others of similar scientific merit!

THE ADMINISTRATION OF ARSPHENAMIN

Elsewhere in this issue appears a letter from Dr. George W. McCoy, director of the hygienic laboratory of the United States Public Health Service, concerning two special points in the administration of arsphenamin, namely, the dilution and the rapidity of administration. His letter is followed by a circular issued by the Public Health Service to all its officers covering the same general subject. Numerous disagreeable results following the use of the various preparations of arsphenamin have led research workers to make a special study of the cause of these accidents. Such studies have indicated that most of the disagreeable results are not inherent in the preparations themselves, but are produced through faulty steps in the administration of the remedies. The suggestions made in the circular of the Public Health Service, if followed by physicians, will aid in preventing repetition of disagreeable after effects.

MENINGOCOCCUS INFECTION

In view of the experience of army physicians in finding many cases of infection with the meningococcus without any evidence of meningitis, Major Herrick, chief of the medical service at the base hospital, Camp Jackson, has urged the abandonment of the term epidemic cerebrospinal meningitis.[1] This suggestion is not an entirely new one; but the considerations on which it is based have apparently not gained sufficient prominence hitherto to emphasize the extrameningeal rôle of the meningococcus through the use of a suitable designation for the general sepsis which this micro-organism may initiate. Practitioners should realize more widely what the unusual clinical facilities of the army base hospitals have emphasized, namely, that a definite meningococcus septicemia not infrequently occurs in which the primary invasion is in the blood stream. Herrick insists that the cerebrospinal distribution of the disease is by no means specific, since other micro-organisms, such as tubercle bacilli and the *Spirocheta pallida* have the same localization. Furthermore, there may be a meningococcic sepsis with involvement of the joints, the pericardium or other structures; hence the designation of cerebrospinal should not be stressed to the exclusion of other symptoms. There is something more than a mere verbal quibble involved in directing attention to the existence of meningococcic sepsis without meningitis. This emphasis, says Herrick, is imperative, because on it is based that modified therapy which, in proper hands, has mitigated the severity of the disease and greatly reduced the mortality—the intravenous serum treatment.

AMPUTATIONS AS WAR DISABILITIES

In the popular mind amputations of the limbs are inevitably conspicuous features of the casualties of warfare. The thought of a battle-scarred veteran of the Civil War commonly brings to mind an armless or legless victim of the damage done by shot and shell. It will come somewhat as a surprise, therefore, to those not conversant with the precise nature of the disabilities of the recent European campaigns to learn how unexpectedly small is the total of those whose wounds and injuries have necessitated amputation. The War Risk Insurance Bureau has issued the statement that approximately 4,000 men of the American Expeditionary Forces have lost arms or legs, and that about 125 have been blinded. There are several reasons which may account for this unanticipated small incidence of amputations among the many thousands of disabled members of the fighting forces of the United States. By the time we entered the war the hospitals had begun to move nearer to the front where the casualties occur. Consequently the injured received treatment far more promptly than in the earlier years when many hours or even days sometimes intervened before adequate surgical care could be given to the wounds. Delay inevitably means increased liability to infection and permanent damage of the affected tissues; whereas the more prompt surgical intervention of the last year of the war has ofttimes permitted the salvation of a wounded member. Furthermore, the methods of wound treatment have progressed to a higher degree of efficiency, which has brought about a corresponding sparing of life and limb. In the treatise of military surgery published by Hans von Gerssdorff at Strasburg in 1517 under the title "Feldbuch der Wundartzney" he states that he had personally performed "nearly two hundred amputations." According to Buck[1] this great increase in the frequency of performing the operation is clearly to be attributed to the increased use of the new agent—gunpowder—in warfare. *Tempora mutantur!*

Medical Mobilization and the War

Personnel of the Medical Department

For the week ending May 2, there were 18,113 officers in the Medical Corps, a decrease of 454 from the previous week. The Medical Reserve Corps contained 1,799 officers. The total number of medical officers discharged since the beginning of the war is 15,552.

HONORABLE DISCHARGES, MEDICAL CORPS, U. S. ARMY

Note.—In the following list, L signifies lieutenant; C., captain; M., major; L. C., lieutenant-colonel; Col., colonel.

ALABAMA

Birmingham—Lull, C., Jr. (M.)
Grand Bay—Dodson, R. B. (C.)
Montgomery—Haigler, J. R. (C.)
Selma—Maas, M. A. (M.)
Vernon—Box, T. T. (L.)

ARKANSAS

Beebe—Abington, W. H. (M.)
Hope—Kolb, A. C. (L.)
Little Rock—Hickman, S. B. (C.)

CALIFORNIA

Fresno—Martin, W. P. (L.)
Los Altos—Rice, P. (C.)
Los Angeles—Brem, W. V. (M.)
Copeland, J. C. (C.)
Crum, R. L. (L.)
Tweedie, A. M. (M.)
Wilson, C. (L.)
Merced—Zirker, D. W. (C.)
Oakland—Adams, L. P. (C.)
Pasadena—Forbes, H. J. (L.)
Hoit, H. A. (C.)
San Bernardino — Owen, G. R. (M.)
San Diego—Burger, T. O. (C.)
San Francisco — Kinslow, F. A. (L.)
Muller, V. A. (L.)
Pauson, C. A. (M.)
Williams, R. B. (M.)
San Jose—Walter, C. H. (C.)
San Leandro—Wills, C. A. (M.)
Scotia—Cottrell, F L. (C.)
Stockton—Hammond, R. R. (C.)

COLORADO

Denver—Roehrig, K. F. (L.)
Grand Valley—Miller, F. H. (L.)
Sopris—Gill, A. E. (L.)

CONNECTICUT

Greenwich—Greenway, J. C. (M.)
Hartford—Reardon, W. F. (L.)
Lyme—Devitt, E. K. (L.)
New Haven—Conte, H. A. (L.)
Sound Beach—Austin, A. E. (C.)
Waterbury — Johnson, A. A. J. (L.)

DISTRICT OF COLUMBIA

Washington—Dunlop, J. (M.)
Martin, U. G. B. (C.)
Saffold, G. S. (C.)

FLORIDA

Arcadia—Bevis, H. P. (C.)
Jacksonville—Boyd, J. E. (L. C.)

GEORGIA

Atlanta—Browne, A. D. (L.)
Bunce, A. H. (C.)
Crenshaw, H. (C.)
Matheson, D. N. (L.)
Pentecost, M. P. (M.)
Strickler, C. W. (L. C.)
College Park—Henley, J. T. (L.)
La Grange—Morgan, D. E. (C.)
Meigs—Summerlin, J. L. (L.)
Poulan—Sumner, G. S. (L.)
Sandersville — Rawlings, F. B. (L.)

IDAHO

Caldwell—Cole, F. M. (C.)
Salmon—Hanmer, C. F. (L.)
Twin Falls—Weaver, C. D. (L.)

ILLINOIS

Alton—Day, W. A. (L.)
Barry—Kuntz, W. W. (L.)
Casey—Foster, O. C. (C.)
Chicago—Bernhardt, H. B. (C.)
Bona, J. J. (L.)
Braham, J. A. (L.)
Brawley, F. E. (C.)
Buhling, W. H. (C.)
Eisendrath, D. N. (C.)
Halperin, G. (L.)
Lagorio, F. A. (L.)
Landau, G. M. (L.)
Larkin, C. J. (C.)
Lower, F. S. (M.)
Lyons, P. D. (L.)
McIntyre, G. (C.)
Meyer, J. (L.)
Miller, E. M. (C.)
Slobe, F. W. (L.)
Whitley, W. R. (L.)
Fiatt—Taylor, A. B. (L.)
La Grange—Danielson, W. A. (L.)
Loami—Whisler, S. F. (L.)
McLeansboro—Hall, E. S. (L.)
Rockford—Keith, D. M. (C.)
Steelville — Wiebusch, A. C. C. (L.)
Vandalia—Greer, M. (C.)
Wheaton—Connor, A. B. (C.)

INDIANA

Anderson—Collins, A. W. (M.)
Carlos—Martin, C. E. (C.)
Clinton—Warman, A. P. (C.)
Danville—Ader, J. (L.)
Evansville—Folsom, E. M. (L.)
Fort Wayne — Duemling, H. A. (C.)
Huntertown—Erwin, H. G. (C.)

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[1] Herrick, W. W.: Extrameningeal Meningococcus Infections, Arch. Int. Med. 23: 409 (April) 1919.

[1] Buck, A. H.: The Growth of Medicine from the Earliest Times to about 1800, New Haven, Conn., Yale University Press, 1917, p. 462.

Indianapolis — MacDonald, J. A. (C.)
Reprass, R. E. (C.)
Indian Springs—Palmeier, J. W. (C.)
Jeffersonville—Elrod, S. B. (C.)
Logansport—Stanton, J. J. (C.)
Tell City—Williams, F. N. (L.)
Terre Haute — Alexander, O. O. (M.)
Gekler, W. A. (L.)
Warsaw—Reynolds, N. L. (L.)
Young America—Lybrook, D. E. (L.)

IOWA

Clarinda—Sellards, J. W. (L.)
Des Moines—Hoover, A. R. (M.)
Harris—Cady, C. C. (C.)
Ute—Nease, L. S. (L.)
Webster City—McCauliff, G. T. (C.)

KANSAS

Ashland—Burket, I. R. (L.)
Jamestown — McGaughey, H. D. (C.)
Marion—Matlock, C. W. (L.)
National Soldiers' Home—Barker, J. A. (C.)
Pittsburg—Henderson, R. C. (C.)
Valley Falls—Marks, J. M. (L.)

KENTUCKY

Covington—Kiely, C. E. (L.)
Edmonton—Bushong, P. W. (C.)
Lexington—Coleman, R. M. (C.)
Louisville—Hinkle, F. W. (C.)
Morehead—Blair, F. K. (L.)
Williamsburg—Moss, C. A. (L.)

LOUISIANA

Kenner—Kopfler, J. S. (C.)
New Orleans—Burdeshaw, H. B. (L.)
Dicks, J. F. (C.)
Gladden, A. H., Jr. (C.)
Norwood—Mengis, C. L. (M.)

MAINE

Bath—Morin, H. F. (C.)
Biddeford—Kendall, C. F. (M.)
Dexter—Murphy, J. H. (L.)

MARYLAND

Baltimore—Brown, G. B., Jr. (L.)
Cobb, S. (L.)
Jackson, W. J. (L.)
Frederick—Conley, C. H. (M.)

MASSACHUSETTS

Boston—Amiral, H. H. (C.)
Butler, C. S. (M.)
Colby, F. H. (L.)
Davis, L. (L. C.)
Dowling, J. J. (L. C.)
Fraser, A. M. (C.)
Fraser, S. (M.)
Goldthwait, J. E. (C.)
Graves, B. A. (C.)
Leland, G. A., Jr. (C.)
Marlow, S. B. (C.)
Marvin, F. W. (L.)
Putnam, J. J., Jr. (L.)
Schirmer, J. W. (M.)
Wood, W. F. (L.)
Brookline—Adams, Z. B. (M.)
Ohler, W. R. (M.)
Holyoke—Beaupre, D. I. (C.)
Lowell—Lambert, J. H. (C.)
Malden—Hunt, W. E. (C.)
Milton—Lane, W. A. (M.)
Natick—Burns, J. E. (C.)
Newton—Reid, W. D. (C.)
Quincy—Reardon, D. B. (M.)
Springfield—Claffy, J. M. (L.)
Dalton, G. F. (C.)
Whitman—Kinsley, W. G. (C.)

MICHIGAN

Bay City—Goodwin, E. (C.)
Blanchard—Dawson, R. E. (C.)
Bridgman—Littlejohn, D. (M.)
Detroit—Hutchings, W. H. (L. C.)
Lambert, R. H. (L.)
Sumner, B. R. (C.)
Young, G. R. (L.)
Marquette—Main, R. C. (C.)
Owosso—Haviland, J. J. (M.)
Swartz Creek—Clark, A. B. (L)

MINNESOTA

Fairmont—Lowe, R. C. (L.)
Faribault—Hanson, A. M. (L.)
International Falls—Monahan, R. H. (C.)
Minneapolis—Corbett, J. F. (M.)
Rochester—Hennessey, R. A. (L.)
Sauk Centre — Moynihan, A. F. (C.)
Slayton—Williams, L. A. (C.)
St. Paul—Sohlberg, O. I. (C.)
White, J. S. (L. C.)

MISSISSIPPI

Meridian—Cooper, I. W., Jr. (M.)
Money—Brandon, J. W., Jr. (C.)
Summit—Allen, K. (C.)
Water Valley—Westmoreland, J. D. (C.)

MISSOURI

Kansas City—Byler, W. F. (L.)
Morris, C. L. (L.)
Odessa—Moennighoff, F. J. (C.)
St. Louis—Hoxsey, T. T. (L.)
Lyman, H. W. (C.)
Post, L. T. (M.)
Versailles—Lutman, H. N. (C.)

MONTANA

Chester—Pastene, A. A. (L.)

NEBRASKA

Craig—Westervelt, A. E. (M.)
Lewellen—Hooper, C. L. (M.)
Lincoln—Woodward, J. M. (C.)
Omaha—Dishong, G. W. (C.)
Molseed, C. S. (C.)
Peru—Jack, W. D. (C.)
Weeping Water—Reed, F. P. (C.)

NEVADA

Winnemucca—Swezy, C. E. (M.)

NEW HAMPSHIRE

Berlin—Hatch, H. S. (L.)
Dover—Bennett, R. J. (L.)
Manchester—Dunbar, C. E. (C.)

NEW JERSEY

Bernardsville—Ross, J. G. (L.)
Bordentown—Brown, D. P. (L.)
Hackensack—MacDonald, H. G. (M.)
Jersey City—Jaffin, A. E. (L.)
Newark—Harden, A. S. (C.)
Kraker, D. A. (L. C.)
New Brunswick—Schureman, J. P. (L.)
Newton—Carber, F. H. (L.)
Orange—Riggins, E. N. (C.)
Plainfield—Currie, N. W. (L.)
Ridgewood—Vroom, W. L. (L. C.)
South Orange—Dane, J. M. (L.)
Trenton—Lavine, B. D. (L.)

NEW MEXICO

Mills—Moon, O. B. (L.)

NEW YORK

Albany—Lanahan, J. A. (C.)
Binghamton—O'Neil, D. C. (C.)
Brooklyn—O'Connell, W. J. (L.)
Schaefer, E. L. (L.)
Spence, T. B. (M.)
Taylor, J. M. (M.)
Turley, H. K. (L.)
Ward, R. G. (C.)
Buffalo—Goldsborough, F. C. (C.)
May, H. F. (C.)
Castile—Foster, H. E. (C.)
Clifton Springs—Weeden, W. L. (L.)
Frewsburg—McCulla, F. J. (L.)
Great Neck—Byrne, D. C. (M.)
Lockport—Walder, F. A. (L.)
New York—Ackerman, H. (L.)
Altman, E. (M.)
Auer, C. (L.)
Barnert, C. (C.)
Bjerring, C. L. (M.)
Buckley, R. E. (C.)
Coryell, C. C. (C.)
Darrach, W. (Col.)
Dearborn, F. M. (L. C.)
Fisher, H. (L.)
Freund, H. H. (C.)
King, J. J. (C.)
Leonard, V. N. (C.)
Miller, J. A. (C.)
O'Dwyer, J. J. (C.)
Richards, J. D. (C.)
Skeel, H. R. (C.)
Taylor, F. (C.)
Uhr, J. S. (L.)
Vejvoda, C. (L.)
Portville—Hackett, G. C. (L.)
Rochester—Amsler, E. S. (L.)
Schuylersville—Gow, E. C. (C.)
Syracuse—Fisher, S. R. (C.)
Wynkoop, E. J. (C.)

NORTH CAROLINA

Asheville—Cocke, E. R. (C.)
Pritchard, A. T. (M.)
Council—Holmes, A. B. (L.)
Henderson—Crews, N. H. (L.)
Kannapolis—Watts, R. E. (C.)
Troy—Armstrong, C. W. (C.)

NORTH DAKOTA

Glenburn—Knudson, K. O. (L.)
Grand Forks—Anderson, W. S. (L.)

OHIO

Akron—Skeels, E. T. (L.)
Townsend, C. E. (C.)
Bellaire—Wright, F. S. (C.)
Bucyrus—Caton, R. J. (C.)
Cambridge—Wells, H. L. (L.)
Cincinnati—Bentley, J. M. (M.)
Dunton, A. H. (L.)
Feid, L., Jr. (C.)
Geringer, A. C. (C.)
Koch, A. E. (L.)
Lehman, B. F. (C.)
Tucker, D. A., Jr. (L.)
Whitacre, M. (C.)
Cleveland—Budd, H. A. (L.)
Columbus—Lehner, C. S. (C.)
Lutz, F. A. (C.)
Seeds, A. H. (C.)
Van Dyke, F. S. (L.)
Welch, J. O. (L.)
Copley—Long, P. B. (C.)
Dayton—Rounds, F. C. (C.)
Delaware—Miller, F. V. (L. C.)
Elida—Miller, G. E. (C.)
Forest—Gibson, H. E. (L.)
Guysville — McLaughlin, P. R. (M.)
Kenmore—Alspach, E. Z. (L.)
Lancaster—Bone, P. S. (L.)
Hamilton, C. H. (C.)
Lima—Longsworth, M. J. (C.)
Wagner, M. A. (C.)
Marietta—Hills, E. W., Jr. (L.)
New Paris—Harris, C. H. (C.)
Norwalk—Gill, R. C. (M.)
Sardinia—Chaney, H. M. (M.)
Sheritts—Stewart, F. R. (C.)
South Charleston—Nehls, E. C. (L.)
Tedrow—Evers, W. P. V. (L.)
Toledo—Iford, D. W. (M.)
Youngstown—Cliffe, E. W. (M.)

OKLAHOMA

Drumright—Karasek, M. (C.)
Gracemont—Wheeler, J. W. (L.)

OREGON

Pendleton—Best, J. A. (C.)
Portland—Birney, V. C. (C.)
Hart, F. C. (L.)
Roberg, D. N. (C.)
Salem—Byrd, R. D. (C.)
Scio—Hobson, E. H. (L.)

PENNSYLVANIA

Ashland—Hoffman, J. L. (L.)
Clearfield—Wilson, W. O. (C.)
Erie—Barrett, M. C. (L.)
Johnstown—Mather, H. R. (L.)
McKees Rock — Hawkins, J. C. (C.)
Philadelphia — Bransfield, J. W. (L.)
Gallagher, J. P. (M.)
Gobs, H. W. (L. C.)
Johnson, W. N. (L.)
Leopold, S. (L. C.)
Norris, P. (M.)
Piper, E. B. (M.)
Sifre, R. J. (L.)
Small, W. B. (C.)
Strecker, E. A. (M.)
Walsh, J. P. (C.)
Pittsburgh—Anderson, R. L. (L.)
Cunningham, G. S. (C.)
Holtz, W. M. (C.)
Mackrell, J. S. (C.)
Mechling, C. C. (C.)
Pearce, S. B. (L.)
Reed, J. M. (C.)
Wickerham, E. P. (L.)
Wholey, C. C. (C.)
Punxsutawney—North, C. Q. (C.)
Sayre—Kuhlman, H. S. (L.)
Schellburg—Brant, M. V. (C.)
Scranton—Corser, J. B. (L. C.)
Robison, J. I. (M.)
Steelton—Gallagher, J. L. (C.)
Towanda—Dye, A. D. (L.)
Tunkhannock—Taylor, J. G. (C.)
Tylersburg—Hess, J. M. (L.)
Washington—Lewis, O. G. (C.)
Wilkes-Barre—Phillips, C. H. (C.)
Reichard, S. W. (M.)

RHODE ISLAND

Pawtucket—Chatigny, J. V. (L.)
Providence—Lenzner, S. G. (C.)

SOUTH CAROLINA

Wiggins—Ackerman, R. V. (C.)

SOUTH DAKOTA

Abderdeen—Clark, W. E. (C.)
Terry—Hodges, V. R. (L.)

TENNESSEE

Chattanooga—Brooks, L. P. (L.)
Gallatin—Rucker, J. N. (L.)
Knoxville—Crawford, D. W. (C.)
Memphis—Brewer, W. A. (C.)
Ligon, J. G. (L.)
Nashville—Walker, H. H. (C.)
Paris—McSwain, J. H. (C.)

TEXAS

Alvin—Winn, F. R. (M.)
Cleburne—Punche, A. E. (L.)
Dunn—Morrow, W. H. (C.)
El Paso—Lloyd, W. H. (C.)
Rheinheimer, E. W. (L.)
Stark, H. H. (C.)
Fredericksburg—Townsend, E. R. (L.)
Galveston—Fay, S. S. (L.)
Hico—Durham, C. E. (C.)
Mercury—Locker, S. B. (L.)
Port Arthur—Bussey, N. A. (L.)
San Antonio—Walsh, F. C. (C.)
Tell—Fox, G. C. (L.)
Temple—Jenkings, J. G. (C.)
Westhoff—Boothe, S. P. (C.)

UTAH

Salt Lake City—Lynch, H. (C.)
Peterson, F. L. (C.)

VIRGINIA

Clinch—Osborne, A. N. (L.)
Norfolk—Strickland, J. A. (L.)
Williams, S. D. (L.)
Petersburg—Johnson, D. B. (L.)
Richmond—Turman, J. W. (L.)

WASHINGTON

Auburn—Lacey, M. J. (L.)
Elma—Jones, C. W. (C.)
Mount Vernon—Roach, L. S. (L.)
Seattle—Booth, J. R. (C.)
Ostrom, H. C. (M.)
Rogers, S. (L.)
Spokane—Hanson, R. (L.)
Hopkins, S. B. (C.)
Sumner—Mitchell, W. B. (L.)
Tacoma—Pascoe, C. S. (L.)
Tenasket—Clough, H. B. (C.)
Touchet—Rose, J. W. (L.)

WEST VIRGINIA

Huntington—Van Pelt, J. F. (C.)
Martinsburg—Cowie, C. S. (C.)

WISCONSIN

Alma Center—Griswold, C. M. (L.)
Hartford—Hoffman, J. G. (L.)
Lancaster—Godfrey, R. C. (L.)
Milwaukee—Brook, J. J. (C.)
Wheeler—Dreyer, R. A. (L.)

WYOMING

Kemmerer—McDill, W. F. (C.)

MEDICAL OFFICERS, U. S. NAVY, RELIEVED FROM ACTIVE DUTY

CALIFORNIA

Campbell—Merrill, W. I.

DISTRICT OF COLUMBIA

Washington—Richardson, J. A.
Spencer, J. B.

FLORIDA

Pensacola—Allen, F. M.

ILLINOIS

Chicago—Urie, J. F.

INDIANA

Indianapolis—Rosier, M.

MARYLAND

Owings Mills—Steele, J. M.

MASSACHUSETTS

Boston—Miniter, F. G.
Brockton—Sullivan, A. J.
Chelsea—Padan, C. D.
Coleraine—Mather, J. A.

MICHIGAN

Detroit—Vokes, M. D.

MISSOURI

St. Louis—Bothman, L

NEW JERSEY

Jersey City—Sirken, C.
Trenton—Collins, H. J.

NEW MEXICO

Albuquerque—Swayne, S. A.

NEW YORK

Brooklyn—Pabst, C. F.
New York—Bisch, L. E.
Crawford, S. E.
Kleinschmidt, H. E.
Serota, H. M.
Turtz, C. A.

OHIO

Cincinnati—Ratliff, T. A.

PENNSYLVANIA

Philadelphia—Becker, J. B.
Miller, M. B.
Thudium, W. J.

VIRGINIA

Covington—File, N. W.
Martinsville—Dudley, G. B., Jr.
Richmond—Buckingham, E. W., Jr.

WASHINGTON

Bremerton—Jones, W. W.

ORDERS TO OFFICERS OF THE MEDICAL CORPS, U. S. ARMY

Alabama

To Army Medical School, from Camp Dix, Lieut. S. B. GAILLARD, Perdue Hill.

To Camp Custer, Mich., camp hospital, from Camp Dix, Capt. R. D. BROWN, Mobile.

To Fort McPherson, Ga., from Charleston, Capt. W. W. BURNS, Selma.

To Westville, N. J., from Charleston, Capt. B. F. ADAMS, Fulton.

To Williamsbridge, N. J., from Long Beach, Lieut. G. LOTTERHOS, Birmingham.

Arkansas

To Camp Pike, Ark., base hospital, from Camp Dix, Major M. D. OGDEN, Little Rock.

California

To Alcatraz Island, Calif., from Camp Sherman, Capt. W. P. MILLIKEN, Oakland.

To Camp Kearney, Calif., from Camp Dix, Major H. G. MARXMILLER, Los Angeles.

To Denver, Colo., from Fort D. A. Russell, Major K. B. TURNER, Los Angeles.

To Fort Des Moines, Iowa, from Camp Dix, Capt. A. L. FISHER, San Francisco.

To Spartanburg, S. C., from Fort Oglethorpe, Lieut. A. O. HOLMES, Redlands.

To St. Louis, Mo., from Fort Winfield Scott, Lieut. D. P. McCORD.

To Walter Reed General Hospital, D. C., from West Baden, Major C. E. PHILLIPS, Los Angeles.

Canal Zone

To report to the commanding general, Canal Zone, from Panama Canal, Major H. HANSON, Ancon.

Colorado

To Camp Upton, L. I., N. Y., from Walter Reed General Hospital, Lieut. W. D. FLEMING, Denver.

Florida

To Fort Riley, from Camp Grant, Capt. O. W. KING, Sanford.

Georgia

To Otisville, N. Y., from Camp Dix, Capt. R. E. McCLURE, Alto.

To Walter Reed General Hospital, D. C., from Fort McPherson, Major W. E. HALL.

The following order has been revoked: *To Fort Oglethorpe* for instruction, Lieut. J. O. BALDWIN, Fort Gaines.

Illinois

To Camp Dix, N. J., from Camp Custer, Capt. E. H. PARRY, Galesburg. Base hospital, from Camp Gordon, Capt. G. FITZ-PATRICK, Chicago; from Newport News, Capt. G. O. De MOSS, Cropsey.

To Camp Dodge, Iowa, base hospital, from Camp Custer, Lieut. A. W. CHRISTENSON, Rockford.

To Camp Grant, Ill., from Camp Custer, Capt. H. P. BAGLEY, Chicago.

To Columbus Barracks, Ohio, to examine the command for cardiovascular diseases, from Fort Sam Houston, Lieut. F. M. SMITH, Chicago.

To Detroit, Mich., from Camp Dix, Lieut. H. J. DWYER, Chicago.

To Fairfield, Ohio, Wilbur Wright Field, from Hot Springs, Capt. S. W. WILLIAMS, Eldorado.

To Fort Riley, from Camp Grant, Capt. K. M. MANOUGIAN, Kankakee; from Camp Lee, Lieut. H. E. RANDOLPH, East Moline.

To Fort Sheridan, Ill., from Camp Dix, Capt. N. C. MORROW, Chicago; Lieuts. F. W. FIEDLER, Batchtown; T. A. CARTER, I. H. CUTLER, A. S. SANDLER, Chicago; from Camp Grant, Lieut. W. E. GATEWOOD, Jr., Chicago; from Charleston, Lieuts. P. A. STEELE, A. VANDERKLOOT, Chicago.

To Fox Hills, N. Y., from Washington, D. C., Lieut. J. STEVENSON, Chicago.

To Otisville, N. Y., from Camp Dix, Capt. R. H. HENDERSON, Chicago.

To report to the commanding general, Philippine Department, from Fort Riley, Capt. B. I. WYATT, Chicago.

Indiana

To Chicago, Ill., from West Baden, Capt. C. R. STRICKLAND, Indianapolis.

To Denver, Colo., from Camp Dix, Lieut. R. W. REID, Union City.

To Fort Riley, from Camp Shelby, Capt. H. M. SHULTZ, Logansport.

To Fort Sam Houston, Texas, base hospital, from Fort Oglethorpe, Capt. H. B. SHACKLETT, New Albany.

To Fox Hills, N. Y., from Camp Dix, Major R. A. VIOSINET, Union City.

To Hoboken, N. J., from Camp Dix, Capt. M. A. FARLOW, Milroy.

The following order has been revoked: *To Fort Des Moines, Iowa*, from Camp Dix, Lieut.-Col. H. O. BRUGGEMAN, Fort Wayne.

Iowa

To Camp Dodge, Iowa, base hospital, from Fort Douglas, Capt. I. E. NERVIG, Sioux City.

To Fort Benjamin Harrison, from Camp Sherman, Capt. E. L. HAWKINS, Council Bluffs.

To Fort Des Moines, Iowa, from Camp Dix, Lieut. G. V. CAUGHLAN, Pacific Junction.

To Walter Reed General Hospital, D. C., from Hoboken, Capt. H. R. CONN, Cedar Rapids.

Kansas

To Fort D. A. Russell, Wyo., from Newport News, Capt. T. L. JONES, Fulton.

The following order has been revoked: *To Pittsburgh, Pa.*, from Jefferson Barracks, Lieut. A. B. OECHALE, Stockton.

Kentucky

To Camp Meade, Md., from Camp Dix, Major C. W. McCLANAHAN, Maysville.

To Camp Pike, Ark., base hospital, from Washington, Major B. F. ZIMMERMAN, Louisville

To Fort McHenry, Md., from Camp Dix, Capt. G. P. GRIGSBY, Louisville.

To Walter Reed General Hospital, D. C., from Camp Dix, Lieut. K. D. WINTER, Louisville.

Louisiana

To Fox Hills, N. Y., from Colonia, Major K. W. NEY, New Orleans.

To Walter Reed General Hospital, D. C., from Camp Shelby, Lieut. V. W. MAXWELL, Ferriday.

Maryland

To Camp Dix, N. J., base hospital, from Boston, Lieut. E. H. HEDRICK, Baltimore.

To Fort McHenry, Md., from Charleston, Capt. J. H. TRABAND, Jr., Baltimore.

To Fort Mott, N. J., from Curtis Bay, Md., Capt. H. A. NAYLOR, Pikesville.

To Fort Riley, from Camp Shelby, Major H. R. CARTER, Jr., Baltimore.

To Hoboken, N. J., from Camp Dix, Capt. M. H. TODD, Galloways.

The following order has been revoked: *To St. Louis, Mo.*, from Camp Dix, Capt. W. H. SMITH, Jr., Hagerstown.

Massachusetts

To Boston, Mass., from Camp Lee, Capt. A. A. FENTON, Norwood; from Newport News, Lieut. L. STRAHLMANN, Boston.

To Camp Custer, Mich., from Camp Devens, Col. J. H. ALLEN. As orthopedic surgeon, from Fort Slocum, Lieut. M. A. GILBERT, Chelsea.

To Camp Gordon, Ga., base hospital, from Camp Dix, Capt. R. B. OBER, Springfield.

To Fort McHenry, Md., from Camp Meade, Lieut. W. H. BLANCHETTE, Fall River.

To New Haven, Conn., from Saybrook, Conn., Capt. A. P. PERRY, Boston.

Michigan

To Camp Custer, Mich., from Camp Jackson, Majors A. E. HARRIS, Detroit; A. J. WARREN, Mount Clemens; G. P. SACKRIDER, Owosso; Capts. W. HAUGHEY, Battle Creek; G. P. RAYNALE, Birmingham; R. A. SHANKWILER, G. VAN RHE, Detroit; R. U. ADAMS, W. E. COLLINS, Kalamazoo; Lieuts. I. G. DOWNER, A. McARTHUR, Detroit.

To Detroit, Mich., from Camp Dix, Capt. J. T. HODGEN, Grand Rapids.

To Fox Hills, N. Y., from Charleston, Lieut. W. R. MANLOVE, Jr., Grand Rapids.

To Mineola, N. Y., Hazelhurst Field, from Wichita Falls, Lieut. J. L. DESROSIERS, Detroit.

To Washington, D. C., from Camp Custer, Lieut.-Col. S. S. CREIGHTON.

Minnesota

To Fort Riley, from Camp Grant, Capt. E. L. HALL, Russell; Lieut. J. R. WOOD, Hallock.

To Fort Snelling, Minn., from Fort Bliss, Lieut. H. E. CANFIELD, Willmar.

To Spartanburg, S. C., from Fort McPherson, Capt. L. G. NEAL, Ponemah.

To Walter Reed General Hospital, D. C., from Carlisle, Lieut. B. A. BAIRD, Rochester.

To Wichita Falls, Texas, Call Field, from Taliaferro Field, Lieut. T. F. McCORMICK, Minneapolis.

The following order has been revoked: *To Fort Oglethorpe* for instruction, Lieut. H. G. BLANCHARD, Waseca.

Missouri

To Camp Sherman, Ohio, base hospital, from Fort McPherson, Capt. W. E. MEANWELL, Columbia.

To Fort McPherson, Ga., from Fort Riley, Major L. T. PIM, St. Louis.

To Fort Riley, from Camp Lee, Lieut. E. BAKER, St. Louis.

The following orders have been revoked: *To Camp Abraham Eustis, Va.*, camp hospital, from Pig Point, Lieut. E. V. KRING, St. Louis. *To Camp Zachary Taylor, Ky.*, from Jefferson Barracks, Lieut. J. L. HUTTON, St. Louis.

Nebraska

To Fort Riley, as orthopedic surgeon, from Fort Des Moines, Lieut. C. W. WAY, Wahoo.

To Fox Hills, N. Y., from Williamsbridge, Major A. C. STOKES, Omaha.

New Hampshire

To Camp Devens, Mass., base hospital, from Walter Reed General Hospital, Lieut. J. C. LAWLOR, Dover.

New Jersey

To Camp Dodge, Iowa, from Hoboken, Lieut.-Col. C. E. McBRAYER.

To Chicago, Ill., as department surgeon, from Camp Dix, Col. W. B. BANISTER.

To Colonia, N. J., from Camp Dix, Major Z. L. GRIESEMER, Roselle; from Camp Dodge, Lieut. J. S. MARK, Chrome.

To Columbus Barracks, Ohio, from Hoboken, Lieut.-Col. C. C. DEMMER.

To Walter Reed General Hospital, D. C., from Camp Dix, Major H. C. MOORE.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Col. E. E. PERSONS; Major J. B. EDWARDS, Leonia.

New York

To Camp Dix, N. J., base hospital, from Pittsburgh, Capt. J. J. SINNOTT, Mount Vernon.

To Camp Jackson, S. C., base hospital, from West Baden, Lieut. L. SASOVER, New York.

To Camp Upton, N. Y., as tuberculosis examiner, from *Spartanburg*, Capt. J. C. DEVRIES, Brooklyn.

To Carlisle, Pa., from West Baden, Lieut. H. BLAUVELT, Brooklyn.

To Colonia, N. J., from Walter Reed General Hospital, Major E. HANSON, New York.

To Detroit, Mich., from Camp Custer, Capt. J. J. CORBETT, Syracuse.

To Fort Benjamin Harrison, from Walter Reed General Hospital, Lieut. J. HARKAVY, New York.

To Fort Hamilton, N. Y., from Fort Slocum, Capt. J. C. E. DAUNAIS, Cohoes.

To Fort McHenry, Md., from Camp Dix, Lieut.-Col. J. W. JAMESON, Major W. W. WEEKS, New York; from Detroit, Lieut. C. W. DEMONG, Syracuse.

To Fort Riley, from Camp Lee, Lieut. J. F. LEWIS, New York.

To Fox Hills, N. Y., from Camp Dix, Major C. W. HOYT, Rochester; Capt. R. P. HUYCK, Herkimer; Lieut. W. G. H. POTT, New *York*; from Charleston, Capt. E. C. FOSTER, Penn Yan; from Hoboken, Major A. C. MARTIN, Rockville *Center*; *from* Oteen, N. C., Lieut. R. C. *BULLEN*, New York; from Walter Reed General Hospital, Capt. B. H. CAPLES, New York.

To Hoboken, N. J., from Charleston, Capt. A. W. BRENNAN, Syracuse.

To Metuchen, N. J., from Schenectady, Capt. G. W. WILLCOX, Hamilton.

To Oteen, N. C., from Camp Lee, Major W. C. McKNIGHT, New York.

To report to the commanding general, Northeastern Department, from Long Beach, Lieut. B. R. BASS, Brooklyn.

To Walter Reed General Hospital, D. C., from Camp Upton, Lieut. M. M. NEMSER, New York; from Long Beach, Major E. B. NEFF.

To Washington, D. C., Surgeon-General's *Office*, *from* Camp Dix, Lieut.-Col. W. B. REID, Rome.

The following orders have been revoked: *To Camp Sherman, Ohio, to examine the command* for cardiovascular diseases, from Jefferson Barracks, Lieut. C. SHOOKHOFF, Brooklyn. *To Fox Hills, N. Y.*, from Camp Dix, Lieut. W. E. CARROLL, New York.

North Carolina

To Biltmore, N. C., from Camp Dix, Lieut.-Col. W. L. DUNN, Asheville.

To Camp Grant, Ill., base hospital, from Camp Dix, Capt. L. F. MAGRUDER, Albemarle.

To Fort Riley, from Camp Lee, Lieut. R. T. UHLS, Franklinton.

Ohio

To Camp Devens, Mass., base hospital, from Walter Reed General Hospital, Lieut. W. H. MILLER, Columbus.

To Camp Dodge, Iowa, from Camp Dix, Major A. H. DUNN, Chillicothe.

To Carlisle, Pa., from Charleston, Lieut. R. G. GROSSMAN, Cleveland.

To Fort McHenry, Md., from Camp Dix, Capt. E. R. TWACHTMAN, Cincinnati.

To Walter Reed General Hospital, D. C., from Camp Dix, Major E. J. McCORMICK, Toledo; Lieut. W. E. DWYER, Cleveland; from Camp Jackson, Capt. R. F. DRURY, Akron.

The following orders have been revoked: *To Fort Oglethorpe* for instruction, Capt. M. H. CARMEDY, Painesville. *To Philippine Department,* from Camp A. A. Humphreys, Capt. H. S. HAYES, Whitehouse.

Oklahoma

To Camp Zachary Taylor, Ky., base hospital, from Camp *Dix*, *Capt.* C. E. NORTHCUTT, Lexington.

To Fort D. A. Russell, Wyo., from Fort Benjamin Harrison, Capt. G. H. WETZEL, *Sapulpa*.

To report to the commanding general, Western Department, from San Francisco, Lieut. C. P. MURPHY, Redrock.

To Westville, N. J., from Camp Jackson, Capt. B. F. ADAMS, Fulton.

Oregon

The following orders have been revoked: *To Fort Leavenworth, Kan.*, from Camp Lewis, Lieut. D. R. ROSS, Salem. *To San Francisco, Calif.*, from Camp Lewis, Capt F. J. ZIEGLER, Portland.

Pennsylvania

To Boston, Mass., from Camp Dix, Major W. BATES, Philadelphia.

To Camp Abraham Eustis, Va., camp hospital, from Washington, Capt. W. S. STEWART, McDonald.

To Camp Gordon, Ga., base hospital, from Spartanburg, Lieut.-Col. J. H. STEARNS, Delaware Water Gap.

To Camp Meade, Md., from Camp Dix, Major W. E. RAKEN, Philadelphia; from Camp Shelby, Major T. W. PENROSE, Philadelphia.

To Columbus Barracks, Ohio, from Camp Zachary Taylor, Capt. H. D. JORDAN, Allentown.

To Eastview, N. Y., from San Francisco, Capt. R. J. HENDERSON, Bowmansville.

To Fort McHenry, Md., from Camp Dix, Capts. I. M. BOYKIM, N. R. GOLDSMITH, S. R. SKILLERN, Jr., Philadelphia.

To Fort Riley, from Camp A. A. Humphreys, Major A. E. DAVIS, Scranton.

To Fox Hills, N. Y., from Hoboken, Capt. R. C. FAGLEY, Kulpmont.

To Pittsburgh, Pa., from West Baden, Lieut. D. T. DITCHBURN, Arnot.

To Walter Reed General Hospital, D. C., from Camp *Dix*, *Capt.* W. W. PROPST, Philadelphia; Lieut. W. H. MACKAY, Harrisburg.

To Washington, D. C., and on completion *to Roland Park*, from Eastview, Capt. R. R. DECKER, Orbisonia. Surgeon-General's Office, from Camp Dix, Lieut.-Col. E. L. ELIASON, *Major* F. C. KNOWLES, Lieut. M. W. BLAIR, Philadelphia.

South Carolina

To Biltmore, N. C., from Camp Sevier, Lieut. W. E. MILLS, Sumter.

To Camp Jackson, S. C., base hospital, from Camp Dix, Major E. C. MAJOR, Latta.

To Carlisle, Pa., from Camp Dix, Capt. J. A. DILLARD, Columbia.

To Fort Riley, from Camp Travis, Lieut. J. L. BLAIR, Sharon.

South Dakota

To report to the commanding general, Western Department, from San Francisco, Major A. M. GIFFIN, Rapid City.

Tennessee

To Camp Zachary Taylor, Ky., base hospital, from Charleston, Major J. L. MORGAN, Memphis.

To Fort McPherson, Ga., from Charleston, Capt. A. H. MEYER, Memphis.

Texas

To Walter Reed General Hospital, D. C., from Camp Travis, Major A. L. VAN METER.

Vermont

To Boston, Mass., from Camp Dix, Lieut. J. D. THOMAS, Pownal.

Virginia

To Washington, D. C., Surgeon-General's Office, from Roland Park, Major N. ARDAN, Bristol.

Washington

To Camp Jessup, Ga., from Charleston, Major F. J. CULLEN, Napavine.

To Fort D. A. Russell, Wyo., from Camp Lewis, Lieut. H. J. HARDS, Tacoma.

To San Francisco, Calif., Letterman General Hospital, from Camp *Dix*, Capt. J. M. HENDERSON, Seattle.

West Virginia

To Washington, D. C., Surgeon-General's Office, from Fort Adams, Major L. C. COVINGTON, Charleston.

Wisconsin

To Erie Proving Grounds, Ohio, from Camp Custer, Lieut. E. A. LINGER, Oconto.

To Fort Riley, from Camp Grant, Lieut. H. A. VINCENT, Beloit.

ORDERS TO OFFICERS OF THE UNITED STATES PUBLIC HEALTH SERVICE

Asst. Surg.-Gen. C. C. PIERCE, proceed to New York for conference relative to venereal control work and training for nurses.

Surg. E. K. SPRAGUE, relieved at *Portland, Maine, and venereal* disease control work in Boston. *Proceed to marine* hospital and assume charge of the Service.

Surg. H. S. MATHEWSON, relieved at Boston, Mass., proceed to the marine hospital at Vineyard *Haven*, Mass., and assume charge.

Surg. L. D. FRICKS, *relieved at Louisville*, Ky., assume charge of field investigations of malaria. Headquarters *transferred from* New Orleans, La., to Memphis, Tenn.

Surg. W. C. BILLINGS, relieved at San Francisco, Calif, proceed to Alexandria, La., and assume charge of the Public Health Service Hospital.

Surg. W. A. KORN, proceed to Fort Stanton, N. Mex., and assume charge of the station.

Surg. L. P. H. BAHRENBURG, proceed to *Dawson Springs, Ky., for* inspection of location for hospital and sanatorium.

Surg. F. H. McKEON, relieved at Fort Stanton, N. Mex., proceed to Charleston, S. C., and assume charge of the quarantine station.

Surg. A. C. SEELY (Reserve), proceed to various points in the States of Oregon, Washington and *Idaho to attend* meetings of various district and county medical societies.

Passed Asst. Surg. LAWRENCE KOLB, relieved at Ellis *Island*, N. Y., *proceed* to Waukesha, Wis., and assume charge of the Public *Health Service* Hospital.

Passed Asst. Surg. R. A. KEARNY, proceed to New York, to investigate the needs of the Hudson Street Hospital when taken over by the Public Health Service.

Passed Asst. Surg. C. L. WILLIAMS, proceed to New *Orleans on* special temporary duty.

Passed Asst. Surg. J. H. SMITH, proceed to Washington, D. C., for conference relative to venereal disease control work in New Jersey.

Passed Asst. Surg. W. L. TREADWAY, relieved *from* duty in school hygiene. Report to the Chief Medical *Advisor, Bureau of* War Risk Insurance for duty.

Passed Asst. Surg. C. V. AKIN, represent the Service at the Seventh Annual Convention of the Southeastern Sanitary Association at Rome, Ga., on May 12 and 13, 1919.

Passed Asst. Surg. C. H. WARING, *relieved at Newport* News, Va., proceed to Washington, D. C., for conference.

Asst. Surg. M. F. HARALSON, proceed to Newport News and Portsmouth, Va., to inspect extracantonment zone work at those places.

Asst. Surg. J. W. MOUNTAIN, detailed as member of Coast Guard retiring board to meet at Portland, Maine, April 29, 1919.

Acting Asst. Surg. R. H. MAYHEW, proceed to Greenville, S. C., for duty *in the* Public Health Service Hospital.

Assoc. San. Engr. H. H. WAGENHALS, proceed to Brunswick, Ga., for investigation of drainage in connection with malaria conditions.

Asst. San Engr. ARCHIE GORMAN, proceed to Texarkana, Ark., *to investigate* malaria control along railroads.

Asst. San. Engr. A. J. WILLISON, proceed to *Memphis, Tenn*, for conference regarding antimalaria measures.

Scientific Asst. H. S. HUTTON, proceed to Perryville, Md., for duty at the Public Health Service Hospital.

Scientific Asst. HAVARD D MOYER, *proceed* to the marine hospital, Baltimore, Md., for inspection of X-ray *laboratory and* equipment.

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest: such as relate to society activities, new hospitals, education, public health, etc.)

ALABAMA

New State Officers.—The Medical Association of the State of Alabama at its annual meeting, April 17, elected the following officers: president, Dr. James S. McLester, Birmingham; vice presidents, Drs. Henry S. Ward, Birmingham, and Walter S. Britt, Eufaula; secretary, Dr. Henry G. Perry, Montgomery (reelected), and treasurer, Dr. Jacob U. Ray, Woodstock. Features of the session were the unfurling of a service flag containing 600 stars, and a memorial service in honor of those physicians of the state who gave their lives in the service of their country.

DISTRICT OF COLUMBIA

Undue Prevalence of Smallpox.—Health authorities, as well as the populace, are disturbed by the unusual amount of smallpox in Washington during the past few months. Quite recently the situation was made more acute by the discovery of some twenty cases among the pupils of St. Ann's Academy, a private school in the southeastern portion of the city. This circumstance raises the question of the efficacy of the existing vaccination law which makes vaccination a necessary condition for admission to the public schools but does not apply to private schools. The health officer is, of course, authorized to compel vaccination wherever necessary in the presence of a smallpox epidemic, but that officer has announced his intention of seeking an extension of the vaccination law as it affects schoolchildren so that the private schools shall be brought within its scope.

The Medical Society Smoker.—The Medical Society of the District of Columbia held a "Get-Together Smoker" at the Wardman Park Hotel, April 30. The president of the society, Dr. William Gerry Morgan, presided over the assemblage of some 175 members and guests. Dr. John B. Deaver of Philadelphia addressed the gathering, the subject of the scientific portion of his address being "The Importance of the Early Recognition of Diseases of the Biliary Passages." He concluded his address by emphasizing the importance of a strong and representative medical organization at the national capital, particularly having in view the world position Washington is destined to hold; and he urged on the members the duty of supporting the movement for the erection of a permanent home for the society. Drs. E. Y. Davidson, William P. Carr, J. B. Nichols, A. Frances Foye and William Gerry Morgan made short addresses on various phases of the building project, and Dr. Thomas Charles Martin concluded the program with one of his inimitable prose poems, the title of which might be rendered "Cows' Tails and Their Relation to Science and Art." Songs appropriate to the occasion were composed by Dr. John Foote and sung by the assembly.

Sanitary Control of the Milk Supply.—The health officer of the District, being clothed with authority to enforce the various provisions of pure food laws, is responsible for the maintenance of safe and desirable standards of purity and food value in the milk supply of Washington. Inasmuch as practically all the milk that is vended here is produced in the states of Maryland and Virginia, the producers are amenable only to the laws of those states and the requirements of the District of Columbia laws are made applicable by a system of licensing producers disposing of milk through Washington distributors. Licenses are granted on the basis of acceptable farm conditions, good health of the herd, and suitability of the milk based on the findings as to bacterial count and butter fat content. But once licensed, revocation or suspension of the license can be secured by the health officer only by prosecution in court, sustained by necessary laboratory evidence. Meanwhile the poor or dangerous milk may be freely distributed to the unsuspecting public. Because of the numerous instances in which inferior milk has recently been found in the local market, the health officer will make renewed efforts to secure legislation authorizing him to confiscate any milk which is found to be dangerous to the public health. Many aspects of the milk producing industry illustrate the close relation between public hygiene, the economics of husbandry, and the economics of eleemyosynary and similar public institutions. Thus a nearby milk producer, who for a number of years supplied the Walter Reed General Hospital with milk on the basis of an annual contract, has retired from the dairying business and sold off his entire herd, because the commandant of the Walter Reed Hospital has adopted the plan of buying milk on the basis of monthly contracts. No doubt there may be good reasons for this action of the hospital authorities, and the plight of the dairyman in this instance is obvious, but it is highly unfortunate that the local milk supply should lose one of its large tributaries and at the same time should be called on to sustain the milk requirements of such a large institution from the remaining resources.

IDAHO

Personal.—Dr. Tracy R. Mason was reelected mayor of Kellogg, April 22.

Tuberculosis Hospital Commission.—The governor of Idaho has appointed a tuberculosis commission to erect two tuberculosis hospitals in the state and to supervise the work preliminary thereto. The members of the commission are Dr. Floyd G. Wendle, Sand Point; Mr. F. A. Davis, Moscow; Norman B. Adkinson, Pocatello, dean of the department of chemistry of the Idaho Chemical Institute, and Mrs. W. A. Athay, Boise. The legislature appropriated $5,000 for the use of this commission and also authorized a levy of one fourth of a mill on all taxable property in 1919, and one eighth of a mill in 1920, which will raise about $185,000 for the construction and operation of the hospitals.

ILLINOIS

Illegal Practitioner Fined.—Evans Tucker, Peoria, was arrested by the Department of Registration and Education of the State of Illinois for practicing medicine without a license and was fined $25 and costs.

Paris Physician in Springfield.—Dr. Paul E. Davy, Paris, a member of the commission for the prevention of tuberculosis in France, who has been spending six months in the United States studying methods of tuberculosis work, spent April 22 and 23 in Springfield as the guest of Dr. George Thomas Palmer.

Personal.—Dr. Frank P. Norbury, Springfield, who has been serving since August, 1918, as acting medical director of the National Committee for Mental Hygiene in New York City, in the absence of Thomas W. Salmon, Col., M. C., U. S. Army, and Frankwood E. Williams, Major, M. C., U. S. Army, has returned home.

State Society Meeting.—The sixty-ninth annual meeting of the Illinois State Medical Society will be held in Peoria, May 20 to 22, under the presidency of Dr. Edward W. Fiegenbaum, Edwardsville. There will be a symposium on influenzal pneumonia which will be introduced by Surg. Wade H. Frost, of the U. S. P. H. S., and the oration on surgery will be given by Dr. Jabez N. Jackson, Kansas City, Mo.

Chicago

Cook County Hospital Examinations.—The results of this competitive examination, just announced, indicate that Rush Medical College secured thirty-six out of forty-five available appointments; Northwestern University Medical College, five; University of Illinois, three, and Chicago College of Medicine and Surgery, one.

Personal.—Dr. John Dill Robertson has been reappointed commissioner of health.——Donald M. Gallie, Capt., M. C., U. S. Army, who has been on duty for a year in the department of facial surgery at Base Hospital No. 11, Nantes, and American Hospital No. 1, Neuilly, France, has returned from overseas.——Dr. Joseph C. Beck, who has been in charge of the Czecho-Slovac Medical Unit at Cognac, France, returned to Chicago, April 25.——French S. Carey and Stanton A. Friedberg, Majors, M. C., U. S. Army, have returned from service with the American Expeditionary Forces in France.

INDIANA

Health Officers to Meet.—The annual meeting of the health officers' school was held under the auspices of the state board of health at the Claypool Hotel, Indianapolis, May 6 and 7.

Society Asks to Change Name.—The Marion County Society for Prevention of Tuberculosis has asked permission in the circuit court to have its name changed to the Marion County Tuberculosis Association.

License Revoked.—An official report states that the license of Dr. George F. Smith, Bicknell, was revoked, Feb. 26, 1919, by the Indiana State Board of Medical Registration and Examination on the ground of misrepresentation of facts in regard to his high school education at the time he secured his license to practice.

Personal.—Dr. Jacob G. Cox, Kokomo, is reported to be seriously ill in a hospital in Cincinnati.——Dr. Lewis N. Geisinger, Auburn, has been elected vice president of the De Kalb County Health and Anti-Tuberculosis Society.——Dr. George E. Lowe, Indianapolis, was severely bruised, April 16, in a collision between automobiles, in which his car was wrecked.——Dr. George V. Cring, Portland, has been appointed health commissioner of Jay County to fill the unexpired term caused by the resignation of Dr. Grant Chaney.

IOWA

Hospital Item.—The new psychopathic hospital, for which an appropriation of $175,000 was made by the last legislature, will be erected on the new University of Iowa campus, Iowa City, west of the new Children's Hospital.——Dr. Willard T. Graham, superintendent of the Iowa Hospital, Iowa City, has decided that adult cripples entitled to treatment at state expense, under the extension of the Perkins law, may be accommodated at the institution.——Mercy Hospital, Davenport, has had plans completed for a new nurses' home to cost $100,000.

Personal.—Dr. J. Fred Clarke, Lieut.-Col., M. C., U. S. Army, Fairfield, commanding Hospital Unit R, which has been overseas for sixteen months, returned home, April 26.——Dr. Mary K. Heard, Iowa City, has been appointed traveling representative of the Y. W. C. A. for Iowa, Nebraska, Wisconsin and the Dakotas.——Dr. George M. Middleton was reappointed city physician of Davenport, April 15.——Dr. Winfield S. Devine, Marshalltown, who was operated on at Rochester, Minn., April 12, for disease of the kidney, is reported to be improving.——Dr. Frank C. Roberts, Fort Madison, has been reappointed a member of the insane commission of Lee County.——Dr. Oscar A. Dahms has been reelected a member of the board of directors of the public schools of Davenport, and Dr. Karl Vollmer has been reelected president of the board.——After being out only thirty minutes, the jury in the case of Dr. Charles A. Snyder, Dubuque, charged with the murder of Mrs. Florence Gagne of East Dubuque, Ill., by the performance of an illegal operation, found Dr. Snyder not guilty.

LOUISIANA

New Officers.—The fortieth annual convention of the Louisiana State Medical Association was held in Shreveport, April 7 to 10, under the presidency of Dr. Wilkes H. Knolle, New Orleans. Dr. Amedee Granger, New Orleans, was elected president, and Dr. Sidney C. Barrow, Shreveport, secretary-treasurer.

New Orleans Inaugurates a Systematic Hay-Fever Campaign.—Three years ago, through the efforts of the New Orleans section of the American Hay-Fever-Prevention Association, an ordinance was passed by the commission council for the control of hay-fever weeds in that city. Although this was beneficial to some extent, it lacked efficiency, as in many cases, persons preferred the fine to paying a larger cost for cutting the weeds. In order to improve its efficiency, this ordinance was amended last year, authorizing the city to cut the weeds after due notice to the property owner. This method, which was instituted by the American Hay-Fever Prevention Association and which is recommended for other cities, is proving efficient to the public from a sanitary standpoint, as well as from an economical standpoint. It is expected to result in a still lower rate in the number of hay-fever cases in New Orleans.——Announcement was made by the Charity Hospital, New Orleans, April 17, that the hay-fever department would resume its semiweekly clinics on Tuesdays and Thursdays which will be continued until the end of the hay-fever season in November.

MARYLAND

Appointments.—The Baltimore City Health Department has made the following appointments: Dr. Wright S. Sudler, health warden for the twenty-sixth ward; Dr. Leon S. Horka, health warden for the twenty-fifth ward, and Drs. Joseph T. Nelson, Bernard V. Kelly and Jay T. Hennessey, throat inspectors for the health department.

Hospital Offers Clinic.—An offer from the South Baltimore General Hospital to establish a maternity clinic without cost to the city was made to the board of estimates recently and has been accepted. Health Commissioner John D. Blake, Baltimore, was authorized to appoint a physician to take charge of the clinic, which is to be maintained in connection with the Bureau of Child Hygiene and Infant Mortality. The clinic is to be for the women of South Baltimore, including those living in the Brooklyn and Curtis Bay sections.

Personal. — Samuel J. Fort, major, M. C., U. S. Army, Catonsville, one of the fifty-four expert rifle and pistol shots selected to form the instructional personnel of the Small Arms Firing School at Camp Perry, Ohio, and later one of six officers detailed from the school to assist in training the Nineteenth Division at Camp Dodge, Iowa, has been discharged from the Army and is now visiting at Catonsville.——Dr. Charles H. Latimer, Laurel, assistant physician at the Laurel Sanitarium, is accompanying a member of the Swiss legation to his home in Geneva, Switzerland.

To Study Tuberculosis.—The National Association for the Study of Tuberculosis has recently granted $10,000 for an exhaustive scientific study to be made in Baltimore of the underlying causes of tuberculosis, under the direction of a committee consisting of Dr. Henry Barton Jacobs, Baltimore, president of the Maryland Association for the Study and Prevention of Tuberculosis; Dr. Raymond Pearl, professor of biometry and vital statistics in the School of Hygiene and Public Health, Johns Hopkins University, and Dr. William T. Howard, Baltimore, assistant commissioner of health. The grant is intended to defray the expenses of the investigation and study for a year and the start will be made as soon as the necessary force of investigators can be organized. Baltimore city makes an annual appropriation of $30,000 to the health department for its tuberculosis work, and yet little progress has been made toward the reduction of the death rate. This is because the department has been unable to make its investigation as far reaching and as effective as the officials in charge have felt that the situation demanded.

MASSACHUSETTS

Charged with Illegal Practice.—David J. Khoury, Lawrence, is said to have been summoned before the local board of health, April 2, charged with the illegal practice of medicine.

Hospital for Women.—A new women's hospital with accommodation for 150 women and girls is to be established in Boston by the Salvation Army. The institution will be largely given over to maternity work.

Public Health Nursing Subdivision Created.—The Massachusetts State Department of Health announces that a subdivision of public health nursing has been created within the division of hygiene. This will include the health instructor nurses of the division of hygiene. Miss Blanche Wildes, one of the present health instructors, has been appointed chief of this division.

Personal.—Edwin M. Kent, Boston, has been appointed supervisor of mouth hygiene in the division of hygiene of the state department of health. His work will have to do with the preparation of educational material on mouth hygiene and gathering and correlating information regardig dental dispensaries in the state.——Miss Bernice W. Billings, chief of the subdivision of tuberculosis in the division of communicable diseases in the state department of health, has resigned to accept a position as executive secretary of the Oneida County (N. Y.) Tuberculosis Committee.——Dr. George Thomas Tuttle, after forty years' association with the McLean Hospital, Waverly, the greater part of this time as superintendent of the institution, has resigned. He has been elected a member of the board of trustees of the Massachusetts General Hospital.—Harvey Cushing, Lieut.-Col., M. C., U. S. Army, in command of Base Hospital No. 5, reached New York, April 22.——Dr. Harold W. Hersey, Winchester, assistant superintendent of the Massachusetts General Hospital, Boston, has been elected superintendent of the Macon (Ga.) Hospital.——Dr. Lee Sutton has been appointed special pathologist in the Boston City Hospital.

MICHIGAN

Alumni Clinic.—The thirtieth annual clinic of the Alumni Association of Detroit College of Medicine and Surgery will be held in Detroit May 13 to 20.

Medical Officers May Borrow from Society.—It is announced that members of the Wayne County Medical Society who have returned from war service may borrow up to $300 to reestablish themselves in practice. The funds will be loaned on notes bearing interest at 4 per cent.

Health Board Act Passed.—An act abolishing the present state board of health and putting in its place an advisory council of health was passed by the senate, April 15, by a vote of 23 to 5. In its final form the bill creates a state health commissioner to be appointed by the governor, and an advisory council of health of five members also to be appointed by the governor.

Personal.—Dr. Arthur J. Carlson, for four years health officer of Escanaba, has resigned.——Dr. Francis Duffield has been appointed president of the board of health of Detroit. ——Dr. Fred N. Bonine has been reelected mayor of Niles. ——Drs. Harry B. Knapp, Battle Creek, and D. M. Morril, Houghton, have become members of the staff of the Copper Range Hospital, Trimountain.

MINNESOTA

Southern Minnesota Medical Meeting.—The midsummer meeting of the Southern Minnesota Medical Association will be held at Rochester, June 30 and July 1.

Resignation Not Accepted.—After an executive session of the state board of health, April 29, it is announced that the board by unanimous vote refused to accept the resignation of Dr. Henry M. Bracken, secretary of the board, which had been demanded by the senate, April 21.

Personal.—Dr. Cora Hulda S. Allen, Heron Lake, has returned after a year in Red Cross service in Paris.——Dr. Milo E. Bushey, Arlington, has been elected secretary of the Sibley County Public Health Association.——Dr. Albert J. Chesley, Minneapolis, who served for six months in France, and then was ordered to duty in Poland, has been appointed head of the public health work with the Polish forces.—— Dr. Frederick Barrett has been elected mayor of Gilbert.—— Dr. John E. Campbell has been appointed city physician of St. Paul.

MONTANA

Personal.—Dr. Clarence J. Munch, Culbertson, has been appointed physician of Sheridan County.——Dr. Herbert H. Judd has been appointed health officer of Bozeman and Gallatin counties.——Dr. Charles E. K. Vidal, Great Falls, has been appointed superintendent of the State Tuberculosis Sanatorium at Galen, succeeding Dr. Alexander D. MacDonald, deceased.

New State Board Officers.—At the annual meeting of the state board of health in Helena, April 7, Dr. Daniel J. Donohue, Butte, was elected president, Dr. Louis H. Fligman, Helena, vice president, and Dr. William F. Cogswell, secretary (reelected). Dr. John J. Sippy, Topeka, state epidemiologist of Kansas for six years, was appointed to a similar position in Montana.

NEW YORK

Reconstruction Committee Favors Health Insurance.—The governor's reconstruction commission has adopted a report favoring compulsory health insurance for industrial workers "as a measure of essential and enforcible health protection." Hearings on the question have been under way for some time and have been attended by leading civic workers and insurance authorities. The investigation is to be continued with a view to preparing a bill that will meet all contingencies.

New York City

Dues of Members in Service Remitted.—The Comitia Minora of the Medical Society of the County of New York has passed resolutions empowering the treasurer to remit the dues of members in service who so request. Such requests must be filled at once so that the books of the society may be brought up to date.

Personal.—Dr. Joseph A. Blake, who had charge of an American Ambulance at Neuilly, and later of a hospital of his own at Ris Orange, France, under the British Red Cross, has returned to this country.——Dr. Elbert M. Somers, Brooklyn, has completed his service with the American Red Cross as hospital superintendent in France.

New Site for Orphan Asylum.—A new site for the Hebrew Orphan Asylum, comprising 103 acres on Two Hundred and Thirty-Third Street in the Bronx, has been purchased for $350,000. It is planned to erect new buildings at a cost of about $1,000,000. The cottage system is favored, with separate buildings for hospital, dispensary and schools.

Association for Study of Exceptional Children.—The National Association for the Study and Education of Exceptional Children held its annual meeting and dinner at the Hotel McAlpin, April 30. Among the speakers were Dr. Frederick J. Farnell of Providence, R. I.; Dr. E. Bosworth McCready, Pittsburgh; Dr. Francis N. Maxfield of Newark, N. J.; Dr. Ira S Wile of New York City, and Health Commissioner Royal S. Copeland

Red Cross to Teach Home Nursing.—The American Red Cross has rented an apartment in a tenement house at 510 West Twenty-Sixth Street where it will teach elementary hygiene and home nursing to tenement dwellers in that locality. If the experiment is successful similar centers will be established in other parts of the city. The enterprise is receiving the cooperation of Health Commissioner Royal S. Copeland and Dr. John Lovejoy Elliott.

OHIO

Honor Senior Physicians.—In honor of the four oldest practitioners of Allen County, a dinner was given at Lima, April 15, by the Allen County Medical Society. The guests of honor were Drs. Jonathan B. Vail and Enos G. Burton, Lima, Newton Sager, Lafayette, and Salathiel A. Hitchcock, Elida.

State Medical Board.—The personnel of the state medical board of Ohio is at present: Dr. Benjamin R. McClellan, Xenia, president; Dr. Charles E. Sawyer, Marion, vice president; Dr. Herbert M. Platter, Columbus, secretary; Dr. Sylvester M. Sherman, Columbus, treasurer, and Drs. John H. J. Upham, Columbus, Lee Humphrey, Malta, Lester E. Siemon, Cleveland, and John K. Scudder, Cincinnati.

Venereal Disease Clinics.—During March nearly 800 persons with venereal diseases were treated in clinics maintained under the supervision of the state department of health, the increase over the figures for February being 250. Clinics were opened in nine cities in March and arrangements have been completed for the immediate establishment in six additional cities. The work of these clinics is being supplemented by educational work and measures for the repressing of vice. Provision is also made for the quarantining of persons whose habits make them a menace to the public health.

Personal.—Dr. William Roehn, who was recently discharged from military service, has been reappointed jail physician at Dayton.——Dr. James B. Hall, Mansfield, suffered a cerebral hemorrhage, April 13, and is reported to be in a critical condition.——Dr. Otto Mueller, Cleveland, was shot through the abdomen, April 15, by a sanitary policeman whose wife had been under Dr. Mueller's care. ——Willard C. Stoner, Lieut.-Col., M. C., U S. Army, Cleveland, commander of Evacuation Hospital No. 3, Treves, Germany, who went overseas with Base Hospital No. 52, in July, 1918, arrived in America, April 4.

Special Course of Instruction for Physicians.—A special course for physicians will be held at the Ohio State Sanatorium, Mount Vernon, from June 24 to June 27. The course has been suggested by Dr. Edward G. Reinert, Columbus, and arranged by Dr. Stephen A. Douglass, Mount Vernon, superintendent of the sanatorium, and includes a course of ten lectures and clinics, including the history of tuberculosis; anatomy and histology of the lungs, physiology of respiration; pathology of pulmonary tuberculosis; modes of infection; theory of child infection; heredity; symptomatology; diagnosis; treatment; differential diagnosis; tuberculosis of children; sociological factors, and prophylaxis. Physicians interested in this course should communicate with Dr. Stephen A. Douglass, superintendent of the Ohio State Tuberculosis Sanatorium, Mount Vernon.

OKLAHOMA

Hospital Standardization.—A meeting has been called at Muskogee for May 21, for the purpose of organizing a state hospital association. One of the prime objects of this organization will be the standardization of hospitals in the state.

Personal.—Dr. John W. Duke, Guthrie, state commissioner of health, has resigned and Dr. Arthur R. Lewis, Ryan, has been appointed his successor.——Dr. Benjamin T. Bitting has been appointed medical superintendent of the State Institution for the Feebleminded, Enid.

Sanatorium Bill Passed.—The last official act of the seventh legislature of Oklahoma was to pass the sanatorium bill which has been fostered by the Oklahoma Tuberculosis Association. The bill provides for two sanatoriums for white persons and one sanatorium for negroes. The appropriation for the former institution is $200,000 and $50,000 for the negro institution, and an additional appropriation of $100,000 was made for maintenance for the coming biennium. The bill also provides for the creation of a bureau of tuberculosis in the state department of health under a chief who will have a salary of $3,000. Each county is authorized to levy a special tax, not exceeding 1 mill, for a tuberculosis fund, and from this levy a large part of the cost of maintenance of the sanatoriums will be derived. The superintendent of each district sanatorium is authorized to establish tuberculosis dispensaries in his district and to employ at least one public health nurse on his staff.

PENNSYLVANIA

State Will Abandon Quarantine Station.—State quarantine service, for years operated at Marcus Hook, will be discontinued June 1. This announcement was made in Harrisburg by Governor Sproul. The federal government will take over the entire quarantine service, thus saving a double inspection of ships before they reach the port of Philadelphia. This change will save the state at least $50,000 a year.

Personal.—Dr. Jacob W. E. Ellenberger, Wilkinsburg, has been appointed acting medical inspector in place of Dr. Adolph Koenig, Pittsburgh, resigned.——Dr. Cornelius C. Wholey, Pittsburgh, who has been psychiatrist to the United States General Hospital at Roland Park, Md., since December, 1918, has returned home.——Joel T. Boone, M. C., U. S. Navy, Pottsville, has been awarded the Croix de Guerre with palm for bravery under fire at Rheims last October.

Philadelphia

Personal.—Ernest LaPlace, Lieut.-Col., M. C., U. S. Army, who has been in command of the post hospital at Fortress Monroe and of the medical stations and coast defense of Chesapeake Bay, has obtained his discharge and has returned to his home.——William M. Late Coplin, Lieut.-Col., M. C., U. S. Army, was recently discharged from Camp Dix, after ten months' service with the American Expeditionary Forces in France and Germany.——Robert G. LeConte, Lieut.-Col., M. C., U. S. Army, has been made a chevalier of the Legion of Honor. Colonel LeConte was attached for some time to the staff of the Pennsylvania Hospital, but went to France with the Methodist Hospital Unit and was naval consultant for Pershing's forces.

Public Health Day.—Wednesday, April 30, was celebrated as Public Health Day and a program was arranged under the auspices of the Department of Health and Charities, Babies' Welfare Association, College of Physicians, City Club, Board of Public Education, Civic Club, Housing Association, Philadelphia County Medical Association, Children's Playground Association, Pennsylvania Society for the Prevention of Tuberculosis, City Parks Association, and Child Federation. At the morning exercises addresses were delivered at all the high schools on matters dealing with personal hygiene and promotion of public health. A long table luncheon was held at the City Club at 12:30 and Dr. Wilmer Krusen, director of public health and charities, and Dr. John D. McLean, assistant commissioner of health, state of Pennsylvania, were the speakers. In the evening a mass meeting was held in the auditorium of the William Penn High School at which Dr. James M. Anders presided.

Hospital Units Return.—The Jefferson Hospital Unit known as Base Hospital No. 38, and the Pennsylvania Base Hospital, known as No. 20, arrived in New York, April 28. Some officers of both units returned home several weeks before, and some of the nurses are still in France, having been transferred to other hospitals. John B. Carnet, Lieut.-Col., M. C., U. S. Army, commander of Base Hospital No. 20, returned home ten days before. Base Hospital No. 20 had been at Chatel Guyon and during the course of their stay they administered to approximately 1,000 sick and wounded and only fifty deaths were reported. While the Chateau Thierry and Argonne drives were in progress, they were taxed to the limit, as the personnel was decreased in order to provide mobile teams to go to these fronts. Base Hospital No. 38, stationed at Nantes, took care of more than 9,000 patients and had a capacity of treating 1,000 patients daily. When the armistice was signed, ten medical officers, thirty-six nurses and 100 men were caring for 2,400 sick and wounded.

SOUTH CAROLINA

New State Board Members.—The following have been selected as members of the State Board of Medical Examiners: Joseph T. Tayer, Adams Run, first district; Frank M. Lander, Williamston, third district; Baxter M. Haynes, Spartanburg, fourth district; J. R. Hill, fifth district, and Julius H. Taylor, seventh district.

New Officers.—At the seventy-first annual meeting of the South Carolina Medical Association, held April 15 and 16, the following officers were elected: president, Dr. Ebenezer W. Pressly, Clover; vice presidents, Drs. Dudley H. Smith, Florence, Charles A. Mobley, Rock Hill, and Linnaeus C. Shecut, Orangeburg, and secretary-treasurer, Dr. Edgar A. Hines, Seneca (reelected). Greenville was selected as the next place of meeting.

VERMONT

New Laws for Medical Education and Public Health.—The legislature of Vermont has passed the following bills relating to medical education and public health:

No. 166, which provides that the State Board of Medical Registration may, at such time as it deems expedient, require of all applicants for examination to practice medicine and surgery a certificate that they have had a one year's internship in a hospital approved by the board.

No. 167, amending Section 6091 of the general laws relating to the standard of requirement for admission to practice medicine and surgery so as to require two college years of preliminary education for medical students.

No. 168, amending Sections 6093, 6094, and 6095 of the general laws regarding the practice of medicine, surgery, osteopathy, and chiropractic, which provides that "A person who, not being licensed, advertises or holds himself out to the public as described in the following section, or who, not being licensed, practices medicine or surgery, or who practices medicine or surgery under a fictitious or assumed name, or who impersonates another practitioner or signs a certificate of death for the purpose of burial or removal, shall be imprisoned not more than three months or fined not more than two hundred dollars or both." This also defines the practice of medicine.

No. 169 bringing all medical practitioners under the provisions of the section for revoking of licenses for cause.

No. 170 which amends Section 6100 of the general laws relating to the qualifications of the practitioners of osteopathy raises the qualifications for osteopaths from three years of nine months each to four years of nine months each.

No. 172 an act to regulate the practice of chiropractic which provides for the appointment of an examination board of three members who shall be chiropractors. The requirements for licenses shall be satisfactory evidence of a high school education or its equivalent, applicants shall be at least twenty-one years of age, of good moral character and graduates of a reputable school of chiropractic requiring three years' resident studentship, payment of $25 to the treasurer of the board, and the successful passing of the examination in anatomy, physiology, symptomatology, hygiene, chiropractic orthopedy, histology, pathology, neurology and principles of chiropractic and clinical demonstration of vertebral palpation, nerve tracing and adjusting, and such other subjects as the board may prescribe.

No. 175 authorized the State Board of Health to appoint district health officers in place of town health officers and specifies their duties.

No. 176, which provides that the director of state institutions may with the approval of the board of control, designate or construct a ward or hospital at any state institution for the purpose of giving necessary treatment and care to inmates of such institutions, as may be afflicted with tuberculosis, or other contagious or venereal disease.

No. 177, amending Section 6250 of the general laws and provide for the reporting of venereal diseases for the entering of sale of drugs by physicians and for the treatment of venereal diseases, and for the reporting by druggists of the sale of medicine for use in the treatment of venereal disease.

No. 178, amending Section 6252 of the general laws and whereby the state provides for facilities for the free laboratory examination of material from suspected cases of venereal diseases and the furnishing of specific treatment at cost or free to clinic patients.

No. 179, which amends Section 6253 and deals with the confidential nature of the reporting or information leading to reports in connection with persons suffering from venereal diseases, and section 7035, which provides penalty or imprisonment of not less than two years, or fines of not less than $500 in cases of marriage of the person who has been afflicted with venereal disease unless certified to have been cured by a legally qualified practitioner; Section 7036 provides a sentence of imprisonment for not less than two years, or fines of not less than $500 for any person who, while suffering from venereal disease, has sexual intercourse.

No. 180 sets aside a sum of $10,000 from the money annually appropriated to the State Board of Health to be expended for the purpose of rural sanitation in order to take advantage of any appropriation from the Federal Government that may become available by the state.

WASHINGTON

Personal.—Ralph Hendricks, Major, M. C., U. S. Army, has been appointed city health officer of Spokane.——Dr. James E. Crichton has been elected president of the Seattle Anti-Tuberculosis League.——A farewell reception was given to Dr. and Mrs. John B. Anderson, Spokane, by the employees of the city health office and members of the Rivercrest Contagion Hospital, April 18. Dr. Anderson is retiring as city health officer after eight years of service to become state commissioner of health. A gold badge bearing the insignia of his new office was presented to Dr. Anderson, Dr. John R. Neely, Spokane, making the presentation speech.——A luncheon was given at Spokane, April 22, in honor of Dr. Herbert E. Wheeler, Spokane, who has just returned after war service abroad.——Dr. Wilbur N. Hunt, Burlington, has succeeded Dr. Francis B. West, Mount Vernon, resigned, as physician of Skagit County.——Dr. Mabel Seagrave, Seattle, has returned after nearly a year of service overseas.——Dr. John W. Mowell, Olympia, chief surgeon of the Industrial Insurance Company, will retire from that office in June, to become a member of the new Safety First Commission and will be succeeded as chief surgeon by Dr. Floyd A. Bird, Kelso.——Dr. Thomas D. Tuttle, health officer of Seattle, has been appointed state epidemiologist of Kansas.——Dr. Hiram M. Read has succeeded Dr. John S. McBride as health commissioner of Seattle.——Samuel E. Lambert, Spokane, Lieut.-Col., M. C., U. S. Army, who recently returned from overseas duty with the Spokane Hospital Unit, has been appointed post surgeon at Fort George Wright, Spokane.——Dr. John Reith, College Place, for seven years superintendent of the Walla-Walla Sanatorium, is about to leave for England, en route to Capetown, South Africa, where he will take charge of a hospital.

WEST VIRGINIA

State Association Meeting.—The annual meeting of the West Virginia State Medical Association will be held at Clarksburg, May 20 to 22.

Examination to Be Held.—Dr. Samuel L. Jepson, Charleston, commissioner of the board of health of the state, announces that the next examination of the West Virginia Public Health Council will be held at the Hotel Huntington, Huntington, July 8 to 10.

Personal.—Dr. Carl F. Raver has been appointed epidemiologist of the state board of health of West Virginia.——Dr. Frank H. Ikirt has been appointed jail physician of Wheeling, succeeding Dr. Harry P. Campbell.——Dr. John W. Kidd, Burnsville, who has been seriously ill, is reported to be convalescent.

CANADA

Addresses in Medicine and Obstetrics.—Sir St. Clair Thompson, London, England, is to deliver the address in medicine at the annual meeting of the Ontario Medical Association in Toronto, May 28, taking for his subject: "Shakespeare as an Aid in the Art and Practice of Medicine;" Dr. J. Morris Slemons, professor of obstetrics and gynecology in Yale University, New Haven, Conn., will deliver the address in obstetrics.

Queen's University Receives Endowment.—Queen's University, Kingston, Ontario, reports that an additional endowment of $1,000,000 has been received for the general purposes of the university. The medical faculty will benefit from this fund in proportion to its requirements, and it is proposed that several more full-time professors will be secured and the departments of physiology, bacteriology and public health will be developed. A fund of $200,000 is also available to be expended in the reconstruction of the hospital.

Public Health in Ontario.—Under the Venereal Act it is not being found that gonorrhea and syphilis is such a menace as some would have the people of the province believe. In March there were only ninety-seven cases of syphilis reported for the whole province; 183 of gonorrhea; chancroid, four; in April, 110 cases of syphilis, 139 of gonorrhea and three of chancroid. There were 137 deaths from influenza in April, and 341 from pneumonia. The total deaths from all causes were 2,510. During the month the Ontario Board of Health distributed 21,557,000 units of antitoxin to places where diphtheria existed.

Personal.—Dr. Alexander McPhedran, Toronto, has resigned the professorship of medicine in the University of Toronto medical department, and Dr. Duncan A. L. Graham has been appointed his successor. Recently Sir William Osler invited professors of medicine in the United Kingdom to a dinner in Dr. Graham's honor, at which it was stated that Dr. Graham was the first whole-time professor of medicine appointed in the British empire. The appointment was made possible by the munificence of Sir John Eaton, Toronto. As a result all physicians in the service of the medical department at the university will resign, so that Dr. Graham will have a free hand in selecting his own staff.——Dr. Archibald P. Knight, for twenty-seven years professor of physiology in Queen's University, Kingston, Ontario, will, it is said, shortly tender his resignation, but will retain his position until a successor is appointed.

LATIN AMERICA

National Medical Congress of Colombia.—The *Repertorio* of Bogotá recalls that the Fourth National Medical Congress of Colombia is to convene at Tunja, August 7, of the current year. The registration fee of $5 is to be sent to Dr. J. Del C. Cárdenas, Bogotá, Colombia.

Prohibition in Mexico.—It is reported from Mexico that the National Board of Health, presided over by Dr. J. M. Rodriguez, has prepared and submitted for consideration by the national government a bill which will result in the enforcement of absolute prohibition in Mexico. In the opinion of the board, alcoholism is a national affliction which should be combated by every possible means.

National Medical Congress of Venezuela.—A Venezuela exchange states that the Third Venezuelan Congress of Medicine has been postponed to July 5, 1921, centennial of the date of the battle which decided the independence of Venezuela. The committee of organization announces that the medical geography of the country is the main topic for discussion. This includes the study of malaria, beriberi, yellow fever and the medical flora of the country.

The Amazonas Medical Association.—The foundation of the Sociedade de Medicina e Cirurgia do Amazonas dates from early in 1917. There were about twenty-four charter members, and meetings have been held regularly nearly every month since, at Manaos. The first president was Dr. J. M. Leão. The officers for the current year are Dr. A. A. da Matta, president; Dr. J. M. Leão, vice president; Dr. J. Linhares de Albuquerque and Dr. F. M. Vidal, first and second secretary, and Dr. E. Duarte, treasurer. There are five committees, including the one with five members which publishes the *Amazonas Medico,* the quarterly issued by the society. All communications for the editors should be sent to Dr. A. A. da Matta, Caixa postal 40 Manaos. It is announced that every published work sent to them will be listed and reviewed.

GENERAL

National Tuberculosis Association Meeting.—The fifteenth annual meeting of the National Tuberculosis Association will be held in Atlantic City, N. J., June 14 to 17, under the presidency of Dr. David R. Lyman, New Haven, Conn. On the first day the chief topic for discussion will be "What Is the Future of the Tuberculosis Movement: Shall it Remain Specialized or Merged with Other Health Agencies." On June 16, there will be symposiums on "What Has More Centralized Control to Offer in Solving the Tuberculosis Problem?" and "The Discharged Tuberculous Soldiers." During the session of the last day, the principal topics for discussion will be "Removal and Relief of Poverty as Factors in the Prevention of Tuberculosis"; "The Schedule of Tuberculosis Work for the Public Health Nurse," and "The Classification and Standardization of Tuberculosis Sanatoriums and Hospitals."

Attempts to Secure a Medical Diploma.—The dean of the University of Minnesota Medical School reports that an individual calling himself William C. Carroll sent in an affidavit issued in Harris County, Texas, stating that a diploma he says he received from the University of Minnesota had been destroyed by fire and asked to have a copy sent to him at 15 Newhall Street, Lynn, Mass. He also claims in another affidavit to have finished a course at the Mayo Clinic in 1915 and in that affidavit refers also to the destruction of his diploma. The report states that the Dr. William C. Carroll, who is the rightful owner of the diploma issued by the University of Minnesota Medical School, is still living in St. Paul. He states that this other "William C. Carroll" is evidently a fraud who is attempting in this manner to secure a diploma. Secretaries of state licensing boards are urged to be on the lookout for this individual.

Bequests and Donations.—The following bequests and donations have recently been announced:

Methodist Hospital, Philadelphia, $25,000 by the will of Henry H. Morrison on the death of two persons who have life interest in the estate.

Peter Bent Brigham Hospital, Boston, $10,000 for the establishment of a free bed, and at the termination of a trust fund created for benefit of Mr. Cochrane's family, the principal of the trust to Harvard College, by the will of Alexander Cochrane, Boston.

Leland Stanford, Jr., University Medical School, San Francisco, a donation of $12,000 for the purchase of one gram of radium to be used in connection with the actinographic department of the Stanford University Hospital, San Francisco, by Mr. and Mrs. William Fitzhugh. The income of this fund is to be used for beds for indigent patients, particularly for those who need roentgen-ray or radium treatment.

Vanderbilt Clinic of the College of Physicians and Surgeons in the City of New York, and Presbyterian Hospital Tuberculosis Clinic, New York City, each $8,500; Loomis (N. Y.) Sanatorium, and Trudeau Sanatorium, Saranac Lake, N. Y., each $3,000; New York Association for Improving the Condition of the Poor and Home Hospital, New York City, each $2,500; Stony Wold Sanatorium, Lake Kushaqua, N. Y., $2,000; Hospital and Home of Rest for Consumptives, Inwood, N. Y., $1,000, and Henry Street Settlement for Tuberculosis Nursing, $500. Donations were by the trustees of the East River Homes Foundation, New York City.

Ophthalmic Examinations.—The American Board for Ophthalmic Examinations will conduct its fifth examination at the Wills Eye Hospital, Philadelphia., June 6 and 7. The board is composed of representatives of the American Ophthalmological Society, the Section on Ophthalmology of the American Medical Association, and the Academy of Ophthalmology and Oto-Laryngology. For a certificate of this board, the examination in ophthalmology consists of case records, written examinations, and clinical laboratory and oral examinations, or so much thereof as may be judged necessary. Candidates in ophthalmology are required to submit twenty-five complete case records of which not more than ten should be descriptive of operations. These records should be of cases of ocular diseases and defects of varied character, including errors of refraction or muscle balance; external ocular diseases or diseases of the uveal tract or retina, or of the optic nerve, or glaucoma. The reports should show especially the reasons for the diagnosis, and for the operative treatment and the technic of operations in operative cases. The written examination will test the candidate's knowledge of the underlying principles of the science of ophthalmology, including anatomy, embryology, physiology, physiologic optics, pathology, relations of the eye to the other organs and diseases of the body. The oral examination will include: the external examination of the eye; ophthalmoscopy (candidates are requested to bring their own ophthalmoscopes); measurements of errors of refraction; testing of the ocular movements and fields of vision; relations of ocular conditions to diseases of other parts of the body and their treatment, and laboratory examination in histology, pathology and bacteriology of the eye. Further information may be had on request from the Secretary, Dr. William H. Wilder, 122 South Michigan Avenue, Chicago.

FOREIGN

Tuberculosis Course in Spain.—On the initiative of Dr. Verdes Montenegro, steps are being taken to establish a course in tuberculosis in the medical school of the University of Madrid.

Honorary Medical Degree Given Red Cross Director.—The University of Liege, Belgium, April 28, conferred the honorary degree of Doctor of Medicine on G. Johan Van Schott, Jr., Washington, D. C., American Red Cross commissioner for Belgium, in recognition of his services in Belgian hospitals during the war.

Tuberculosis in Austrian Prisons.—Speaking before the Massachusetts Anti-Tuberculosis League in Boston, April 23, Seymour H. Stone, secretary of the Boston Tuberculosis Association, and who has been in charge of Red Cross work in the Province of Genoa, Italy, declared that between 40,000 and 60,000 soldiers have contracted tuberculosis in Austrian prisons.

Tragic Death of Doederlein.—According to a cable dispatch, Prof. Albert Doederlein was among the hostages said to have been shot in Munich during recent political disturbances. Doederlein has been professor of obstetrics and gynecology at the University of Tübingen since 1897. Before that he served for a time at the University of Groningen in Holland. He has written much on puerperal fever and on various gynecologic surgical subjects. He had not quite reached his sixtieth year.

Navy Aids Red Cross Work.—Six submarine chasers have been placed at the disposal of the American Red Cross by the Navy for the transfer of personnel and supplies to the various islands in the Grecian Archipelago where the work of the Red Cross has been begun and is rapidly increasing. ——King Alexander of Greece, April 9, received Lieut.-Col. W. Anderson, member of the American Red Cross Commission to the Balkans, and his staff, and Lieut.-Col. Edward Capps, director of the American Red Cross in Greece, and expressed his appreciation of the work done by the American Red Cross in Macedonia, and of the efforts of the physicians and nurses in checking the ravaging of typhus in Macedonia and the islands of the Grecian Archipelago.

MEXICO LETTER

Mexico City, April 29, 1919.

A Pasteur Institute at Managua

Having the desire of establishing a Pasteur Institute, the government of Nicaragua has asked the Mexican government to send, at the expense of the former, a person to establish it. In compliance with this request, the Mexican authorities have intrusted Dr. G. Leal with this duty, and he will depart shortly with the necessary personnel and equipment. As a courtesy to a sister republic, the Mexican government will bear the expenses connected with the trip.

Intellectual Interrelations

Mention has been made at different times in these letters from Mexico of the more or less serious plans to establish an exchange of professors and students between Mexico and the United States, and I have expressed regrets that nothing concrete came out of such plans. It seems that something definite, however, will at last be accomplished in this direction, for the University of Washington has submitted plans for a proposed exchange with the University of Mexico. This will begin by sending a Mexican professor to Seattle to begin his course Jan. 2, 1920, and end it September 30, devoting the other three months to giving conferences on Mexican civilization, history, and customs in the states of Washington, Montana, Idaho and Oregon. This professor should, of course, know English, and would be accompanied by as many students of both sexes as might be determined by the University authorities of Mexico. The American professor would arrive at Mexico before February 7, when his course would begin, ending in October, and he would devote the rest of the year in visiting the universities of the states of Puebla, Jalisco, and Michoacán, in which he will give conferences in Spanish on American subjects. The expenses of this exchange of professors would be borne by the respective universities.

Commission for the Study of Typhus

In accordance with the resolutions adopted by the Congress on Typhus Fever, held last January, there has just been organized in this city a central commission for the study of typhus fever. The commission will have for its object to initiate, direct and advance the investigations made in this country on typhus (*tabardillo*), and it is preparing a general program for both clinical and experimental work which, it is believed, will result in yielding at an early date satisfactory information on the cause and treatment of typhus fever, and of the preventive measures which should be enforced against this disease. The commission has requested the assistance of the public health and political authorities, the medical profession, scientific associations, and the people in general, since the work is of general interest. The chairman of the commission is Dr. D. José Terrés, and the secretary Dr. D. Alfonso Pruneda, whose address is : 1/a. del Alamo, no. 14.

International Congresses

The Congreso de Americanistas, which was going to meet in Rio de Janeiro next June, has been postponed until the year 1920.

Antialcoholic Campaign

There has just been founded a league called "Asociación Anti-alcohólica Nacional," having for its object a campaign against alcoholism. The league will oppose the transfer of American distilleries to Mexico. They say that in the border towns the traffic in spirituous liquors is on the increase, since those who cannot get them in Texas have only to cross the border to supply themselves in Mexican territory.

Personal

Dr. R. Raygadas will soon leave for the city of Berne to represent the Mexican Red Cross at the International meeting which will be held there after peace is signed.

Dr. G. Gómez has been elected president of the Mexican House of Representatives.

Dr. R. Cepeda, president of the Board of Aldermen, has asked to be relieved of his place, because of his being a senator. He probably will be succeeded in his aldermanic position by another physician, Dr. L. Coyula.

Dr. M. Aveleyra and Dr. A. B. Vasconcelos have obtained permission from the university authorities to give extra courses (cátedras libres) in the School of Medicine on medical pathology.

LONDON LETTER

LONDON, April 7, 1919.

Chemistry in the National Service

At the annual meeting of the Chemical Society, the president, Sir W. J. Pope, delivered an address which showed how British science in the end outclassed the long and careful preparations of the Germans. He remarked that the efficiency of the British gas protection, which called for the exhibition of so much scientific skill both in research and in manufacture, was an illustration of the paramount importance of science which appealed to the general public; but it was only a small branch of the enormous chemical problem which presented itself to the nation nearly five years ago and which led to the formation of the department of explosives supplies. As the magnitude of the struggle became gradually obvious, it was realized that the whole of the resources of the empire would have to be utilized. A census of all available chemical products had to be taken, and schemes for their exploitation laid down; all materials had to be apportioned with the knowledge that whatever was used for the manufacture of one particular war product left a corresponding shortage of that particular raw material in connection with the manufacture of some other and perhaps equally essential product. The necessity for utilizing all the chemical resources of the country led to the attempt to extract the last possible fraction of efficiency in each component process, and the huge production—at the time of the armistice the country was making about 100,000 tons yearly of nitric acid and sulphur trioxid, 60,000 tons of trinitrotoluene and 35,000 tons of cordite—made it profitable to carry out a vast amount of careful scientific investigation of details of manufacture.

An instructive example of the results of the struggle for economy was found in the rivalry which arose between picric acid and ammonium nitrate as high explosives. The former cost about $925 a ton to make, the latter about $250, and trinitrotoluene about $500. A mixture of trinitrotoluene and ammonium nitrate, known as amatol, which was introduced early by the research department at Woolwich, was less costly to manufacture, apart from other advantages. The growing appreciation of its merits led to discontinuance of the manufacture of picric acid in this country last summer, to its adoption in place of picric acid as the American standard high explosive, to the approaching elimination of picric acid from the Italian military program, and to replacement of picric acid by amatol in the French service. Our production of the chemical materials needed for a great European war, though negligibly small in 1914, gradually attained satisfactory dimensions. The great chemical factories of Central Europe could divert their production at very short notice. Why, then, were the Allied nations given time to develop their war production of explosives and noxious materials from nothing? When in July, 1917, the Germans first began to use the so-called mustard gas, British chemists were amazed to find, from examination of the product, that it was being manufactured by a technically cumbrous process that gave a yield of, perhaps, 40 to 60 per cent. of the theoretical. By the end of January, 1918, we had worked out a process which yielded in the laboratory from 98 to 99 per cent. of the theoretical. This was communicated to our allies, who at the time of the armistice had an available daily production of mustard gas equal to the monthly production of the Central nations. German chemical service was, therefore, inefficient and the scientific chemists under its control were incompetent. But while other instances could be given to show that Germany was badly served by her scientific men during the war, it would be difficult to overrate the skill and perseverance exhibited by the German chemical manufacturers. The view that this country is superior to Germany in the possession of creative scientific power had always been maintained in modern times by students of philosophy and history, and was amply demonstrated during the last four years. While we overcame our handicap by a continuous flow of novel scientific devices of military value, our enemies passed through the war with little more in the shape of novel effects than those laboriously elaborated during the preceding years of peace.

"Colonies" in the Treatment of the Tuberculous

A memorandum on the share of "Colonies" (institutions for training and for employment) in the treatment of the tuberculous, prepared by Dr. J. E. Chapman, medical inspector of the local government board, has been issued. In a prefatory note, Sir Arthur Newsholme, late medical officer of the board, says that the memorandum indicates possible lines of development, and points out that for control over tuberculosis to be satisfactory it must extend beyond sanatoriums and colonies and include satisfactory housing. It is uneconomical to neglect the home life of consumptives on whose previous medical treatment large sums have been spent, either as regards bedroom accommodation or the nutrition of the patient or his family. No scheme for the control of tuberculosis can be regarded as satisfactory which does not embrace the whole life of the consumptive patient.

Dr. Chapman states in his memorandum that colony treatment is the natural development of measures taken in sanatoriums to secure for selected patients more permanently beneficial results than can be obtained by sanatorium treatment alone. The work provided in the earlier colonies was usually agricultural, but few of the patients continuing in their occupations after discharge from the colony. More recently colonies have been established in which patients are employed and trained in occupations which, although prima facie not so suitable as agriculture, can be followed under reasonably good conditions, and are likely to be adopted by the patients as a means of earning their livelihood.

The first point to decide is whether or not a patient can return to his old occupation. If this is consistent with his health and offers an adequate wage, the idea of a new occupation should not be entertained. The occupation selected should give an almost assured outlook for continuous employment with adequate wages and under reasonably good working conditions. Although better results may be anticipated for colony treatment than is practicable under present conditions of sanatorium treatment, there remains considerable risk of the breakdown of the patient on his return to ordinary life. To minimize this risk the services of care committees should be available to assist patients after discharge from the colony. It is important also that ex-patients should be housed under conditions which will enable them to maintain health. It is suggested that about 5 per cent. of the new houses to be built under impending housing schemes should have a separate bedroom for the patient, in which free perflation of air is secured. The extension of colony treatment to certain classes of patients in which the disease is unlikely to become arrested is worthy of consideration. The colony might be used with advantage as a half-way house between the sanatorium and ordinary life for patients whose health has been greatly improved by sanatorium treatment, but who will probably relapse very quickly if the transition to full work is abrupt. Provision might also usefully be made at colonies situated near a town for the part-time employment of irrecoverable patients whose working capacity is temporarily or permanently impaired. The provision of suitable part-time work adapted to their capacity and of suitable housing would enable the patients and their families to derive the maximum benefit from such financial assistance as is available. This further development of colonies would not only benefit the patients, but would also form an important measure for diminishing the spread of infection.

PARIS LETTER

PARIS, April 10, 1919.

Treatment of War Injuries of the Spinal Cord

At a recent meeting of the Société de chirurgie de Paris, Dr. Tuffier read a communication on this subject from Dr. R. Dumas. Dumas is of the opinion that wounds of the spinal cord should be subjected to the same treatment as all other war wounds, that is to say, by excision, removal of fragments of bone, repair of nerve lesions—when that is possible—and closure of the wound. Tuffier, however, does not believe that such treatment should be the rule, because in a large number of cases when the patient is in shock his life would be endangered by operation, whereas after ten or twelve days the operation is no more serious than with any ordinary war wound. Dumas' statistics confirm this statement: In thirteen cases in which operation was done between the first and the fifth day after the injury occurred, death resulted in five; while only three fatalities occurred in twelve cases in which operation was done some time during the first two months after the wound was inflicted. None of the patients who were operated on early received any special benefit therefrom, nor was there any return of motion or any improvement in sphincter function, and only three showed evidence of slight regression of anesthesia and corresponding return of sensation. Nor did those patients who were operated on late show any evidence of improvement. Nothing, in short, seems to justify the opinion that wounds of the spinal cord should be treated like other war wounds, and early intervention does not seem to be called for. An exception should be made, however, in those cases which present incomplete lesions or compression of the cord by a projectile or a bone fragment, as shown clearly in the roentgenogram. In these cases marked improvement may be obtained by immediate operation, but it must be borne in mind that removing the cause does not necessarily suppress the effect. Even after removing the intramedullary projectile or the bone fragment, or after relieving compression caused by a displaced vertebra, functional disturbances may persist, sometimes indefinitely. Everything depends on how much pathologic change has taken place in the cord. However, it is certain that in all cases in which incomplete division or compression of the cord is suspected, intervention, after the shock symptoms have disappeared, is indicated.

The Smallpox Vaccination Service During the War

Dr. A. Fasquelles, director of the Service antivariolique e l'Armée, recently read a report at the Académie de médecine on the work done by his department and the results that had been obtained during the war. This Centre vaccinogène de l'Armée was organized by the Service de Santé militaire, and it succeeded in ministering to the needs of the various armies, the navy and the colonies in the tropics. The average of positive revaccinations exceeded 50 per cent. During the war of 1870-1871 more than 120,000 French soldiers were infected with smallpox, and more than 25,000 died; during the recent war only twelve cases occurred in the metropolitan French army, with only one death. This is the first time that a war has not been accompanied by a smallpox epidemic.

Progress of French Medicine

In response to a request made by the medical department of the U. S. Army, biweekly medical meetings are to be held in the Grand Amphithéâtre of the Paris medical faculty for the purpose of discussing contributions made to medicine by French investigators. At the first two meetings Professor Richet will describe the work of Descartes, Lavoisier, Bichat, Claude Bernard and Pasteur.

French Urologic Society

The Société française d'urologie has been formed in Paris. Its membership will consist of active and honorary members. Professor Guyon is honorary president and Dr. Legueu, professor of diseases of the genito-urinary system on the Paris medical faculty, is president.

To Increase the Birth Rate

M. Simonet submitted a report to the senate on the proposition advanced by him to increase the donations to be made to public and private enterprises engaged more particularly in raising the birth rate and promoting infant welfare.

Association of the War Blinded

The war blinded have formed an association to provide means for putting to the best use the activities of which they are still capable and for mutual aid and moral and material welfare. Plans will be studied to establish funds for mutual aid, to cooperate in the purchase of raw materials, arrange for cooperative work and salesrooms, in short, to provide for every possible means and measures which will make the life of the blind easier.

Closing the Spanish Hospital

The Spanish hospital has recently been closed with suitable ceremonies. This hospital was established for the French wounded at the instance of King Alphonso; the maintenance and management were in charge of the Spanish colony. M. de Quinonès de Leon, the Spanish ambassador, presided. The grand cross of the Mérite militaire was awarded to Dr. de Sard, the physician in chief of the hospital, and other crosses of the same order were given to all those who had volunteered their services to realize this important war work.

Antialcohol Conference

At the suggestion of the English and American representatives of the antialcohol movement, the Ligue nationale contre l'alcoolisme has summoned a Conférence internationale des hygiénistes of all countries of the world, both allied and neutral. This conference holds its sessions in the headquarters of the Ligue, April 3 to 5, 1919. The following propositions will be discussed: (1) List of antialcohol desiderata to be submitted to the Peace conference in conformity with Article 19 of the constitution of the League of Nations; (2) special measures taken against alcohol during the war; (3) the new aspect to be given, after peace is declared, to the organization of the international defense against alcohol; (4) measures to be taken to develop further the scientific and statistic researches already in progress, notably those under way at the Bureau international de Lausanne.

Fraternizing of American and French Students

The Association générale des étudiants de l'Université de Paris recently tendered a reception to the American students returning from the front. M. André Tardieu, general commissioner of affaires de guerre franco-américaines, presided and was assisted by M. Lucien Poincaré, rector of the University of Paris, the deans of the faculties and numerous professors and Colonel Exton, in charge of the American student soldiers. M. Tardieu in the course of impromptu remarks dwelt on the community of ideals which had brought about the Franco-American alliance, and voiced his approval of the students' plea—that their comrades be permitted to return to their studies as soon as possible. He promised to use his influence with parliament and the government to bring this about.

Scientific Institute Established at Saigon

M. Albert Sarraut, governor-general of Indo-China, recently announced the establishment of a scientific institute at Saigon, to study the development and utilization of the products of the soil and of the water of Indo-China. An inventory will be made of the natural resources of Indo-China, and the institute will aim to exploit them properly by means of laboratory studies, experimental research and scientific explorations.

Removal of Certain Food Control Measures

M. V. Boret, minister of agriculture and food commissioner, has removed certain restrictions on foods, such as the restriction on the manufacture and sale of fresh pastry, the use of bread flours for making biscuits and pastry; the manufacture and sale of desiccated, sterilized or condensed milk, of butter, cheese and other milk products; the manufacture and sale of confectionery, especially of chocolate confections and milk chocolate, likewise the restriction on the use of eggs and butter for making crackers (biscuiterie) and pastry.

Personal

Dr. Albert Calmette, former director of the Institut Pasteur at Lille, now subdirector of the Institut Pasteur at Paris, was recently elected an active member of the section on public hygiene and legal medicine of the Académie de médecine.

Marriages

C. Harold Heffron, Lieut., M. C., U. S. Army, Metamora, Ohio, on duty at Fort Sheridan, Ill., to Miss Elsie Lindbergh of DeKalb, Ill., at Chicago, April 8.

John Francis Fennessey, Capt., M. C., U. S. Army, Dorchester, Boston, to Miss Katherine T. Whalen of Brookline, Mass., April 22.

Malcolm McLean Morrison, Lieut., R. A. M. C., Los Angeles, to Miss Antoinette Miklau of San Francisco, at Los Angeles, April 4.

John Henry Ernest Fust, Lieut., M. C., U. S. Army, Carney's Point, N. J., to Miss Dorothy M. Cooke of Yonkers, N. Y., April 26.

Garrette Van Sweringen, Fort Wayne, Ind.; to Miss Mary E. MacDonald of Columbia City, Ind., at Fort Wayne, April 21.

John Edward Kelley, Capt., M. C., U. S. Army, to Miss Rose Ann Gahan, both of Chicago, April 26.

Ada Scott Conner Morton, San Francisco, to Robert Frederick Lewis, in New York, May 1.

Albert S. Lowenson to Miss F. Carlyn Hanline, both of Baltimore, April 30.

Emmet Francis Casey to Miss Elsa E. Singer, both of Chicago, January 8.

Deaths

Grenville Mellen Weeks, Kearny, N. J.; New York University, New York City, 1861; aged 81; surgeon, U. S. Navy, and later major and surgeon and brigade surgeon of U. S. Volunteers and medical director of the district of Florida during the Civil War; who reentered the service in 1865 as surgeon and acting Indian agent during the Indian troubles in Minnesota and the Dakotas; author of the resolution recognizing Cuban independence, which was adopted by Congress in 1898; organizer and president in 1869 of the first Christian union, to urge a universal peace union of all creeds; died at the Soldiers' Home, Kearney, N. J., April 25.

Walter Stevenson Slicer ⊕ Lieut., M. C., U. S. Army, Roanoke, Va.; University College of Medicine, Richmond, Va., 1904; aged 38; who closed his hospital, known as Slicer's Hospital, Roanoke, July 1, 1918, to enter the Army and was in training in Fort Oglethorpe, Ga., and later was stationed at Base Hospital No. 124, Camp Hancock, Ga., and was honorably discharged from the Army, January 17; who was operated on for the removal of tonsils and adenoids, January 22; died twelve hours later from cerebral embolism.

William E. Lawrence ⊕ North Haverhill, N. H.; Baltimore Medical College, 1896; aged 47; medical referee for Grafton County; a specialist in tuberculosis; a member of the state constitutional convention in 1912, and a member on the state legislature in 1913 and 1914; formerly a trustee of New Hampshire state institutions; a trustee of Haverhill Academy and Woodsville Guaranty Savings Bank; died in the Woodsville Hospital, April 19.

Floyd S. Crego, Buffalo; Medical College of Ohio, Cincinnati, 1879; a member of the Medical Society of the State of New York; neurologist to Erie County, Emergency, Mercy and German hospitals, Buffalo; formerly professor of nervous and mental disease in the medical department of Niagara University; a member of the Buffalo Academy of Medicine, and a well known alienist; died at his home, April 23, from angina pectoris.

Pearl Tenney Haskell, Bangor, Me.; Bowdoin Medical School, Brunswick and Portland, Me., 1893; aged 50; a member of the Maine Medical Association; for two years assistant superintendent of the New Hampshire State Hospital, Concord, and from 1914 to 1917 assistant superintendent of the Maine State Hospital at Bangor, and since July, 1917, superintendent of the institution; died at his home, April 13.

Duncan R. MacMartin ⊕ Chicago; McGill University, Montreal, 1888; aged 57; a well known surgeon; associate professor of surgery in the Chicago Polyclinic; a member of the staff of the Polyclinic, St. Luke's and Henrotin hospitals; medical director of the American Bankers' Insurance Company; was found dead in his room in the Great Northern Hotel, April 30, from cerebral hemorrhage.

Herbert Martin Bishop, Los Angeles; Yale University, New Haven, Conn., 1865; aged 75; surgeon of the First Connecticut Volunteer Cavalry during the Civil War; once president of the California State Homeopathic Society; widely known as an amateur astronomer; died at his home, April 23.

Emmet V. Ball, Atlanta, Ga.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1894; aged 48; a specialist on diseases of the eye, ear, nose and throat; professor of laryngology and rhinology in his alma mater; died at his home, April 23, from heart disease.

Calvin Sloane May ⊕ New York City; Yale University, New Haven, Conn., 1873; aged 71; a member of the New York Academy of Medicine; at one time acting superintendent of the Connecticut Hospital for the Insane; died suddenly at his home, April 26.

Dwight Silliman, Hibbing, Minn.; New York University, New York City, 1866; aged 77; for many years a practitioner of Hudson, Wis., but since 1914 a resident of Hibbing; died at the home of his son in Hibbing, April 19, from cirrhosis of the liver.

Lucinda L. Combs Strittmatter, Columbus, Ohio; Woman's Medical College of Pennsylvania, Philadelphia, 1873; aged 70; a pioneer medical missionary in China, where she served from 1873 to 1881; died at the home of her son in Columbus, April 23.

Francis Joseph Giblin, Boston; Harvard Medical School, 1893; aged 51; a member of the Massachusetts Medical Society; formerly chairman of the medical staff of St. Mary's Infant Asylum, Dorchester, Boston; died at his home, April 13.

John William Hurley, Elizabeth, N. J.; New York University, New York City, 1882; aged 60; for three years an apothecary in the Navy; died at his home, April 15, from endocarditis following chronic articular rheumatism.

James Madison Lovelady ⊕ Sidney, Iowa; College of Physicians and Surgeons of St. Joseph, Mo., 1881; Missouri Medical College, St. Louis, 1887; aged 64; died at his home, April 3, from cerebral hemorrhage.

William Charles Langman, Cleveland; Eclectic Medical Institute, Cincinnati, 1898; aged 56; died in the Cleveland City Hospital, April 11, from injuries received March 3, when he was struck by an automobile.

C. Henry L. Bush, Woodville, Ohio (license, Ohio, 1896); aged 79; one of the incorporators of Woodville, and for several years a member of the board of education; died at his home, April 17, from uremia.

Benjamin G. Allen, Chattanooga, Tenn. (license, Tennessee, 1890); a practitioner since 1888; aged 49; a member of the Tennessee State Medical Association; died at his home, April 11.

Clyde Roy Rorabaugh, Seattle; Medico-Chirurgical College of Philadelphia, 1903; aged 39; a member of the Washington State Medical Association; died at his home, April 16.

Nathan Newby, Wichita, Kan.; Physio-Medical College of Indiana, Indianapolis, 1876; aged 77; a practitioner since 1869; died at his home, April 22, from cerebral hemorrhage.

Francis O. Lowe, Kewanee, Ill.; University of Illinois, Chicago, 1886; aged 57; a member of the Illinois State Medical Society; died at his home, April 27, from pneumonia.

Joseph Mark Kearney, Chicago; Rush Medical College, 1897; aged 44; formerly assistant physician at the Elgin State Hospital; died at his home, April 15, from pneumonia.

Chalmer Nathan Hatfield, Fostoria, Ohio; University of Illinois, Chicago, 1904; aged 42; a member of the Ohio State Medical Association; died at his home, April 22.

Alexander B. McCrea, Berwick, Pa.; Long Island College Hospital, Brooklyn, 1865; aged 81; a veteran of the Civil War; died at his home, April 12, from influenza.

Elias Hicks Trueblood, Salem, Ind.; Physio-Medical College, Cincinnati, 1885; aged 88; died at the home of his daughter in Salem, March 4, from senile debility.

Alfred J. Becker, Catasauqua, Pa.; Hahnemann Medical College, Philadelphia, 1885; aged 58; died at his home, April 16, after an operation for epiplopexy.

Marshal William Craton, Carrollton, Mo.; New York University, New York City, 1882; aged 62; died at his home, April 5, from cerebral hemorrhage.

Theodore B. Redmond, Danville, Ill.; Indiana Medical College, Indianapolis, 1875; aged 72; died at his home, April 18, from cerebral hemorrhage.

James Wardrope Ellis, San Jose, Calif.; New York University, New York City, 1882; aged 69; died at his home, March 3, from cerebral hemorrhage.

William Alexander Melton, Jr. ⊕ Warrensburg, Ill.; Northwestern University Medical School, Chicago, 1896; aged 56; died at his home, March 28.

Irénée Cier, Monroe, La.; Tulane University, New Orleans, 1898; aged 41; also a druggist; died at his home, April 17, from cerebral hemorrhage.

James W. Harris, New York City; United States Medical College, New York City, 1882; aged 71; died at his home, April 13, from pneumonia.

John W. Rutledge ⊕ Minneapolis; Medical College of Ohio, Cincinnati, 1875; aged 74; died at his home, February 24, from arteriosclerosis.

Joseph James Hartley, Richmond, Va.; Meharry Medical College, Nashville, Tenn., 1908; aged 42; was found dead in his home, March 21.

Edward Everett Dowdle ⊕ Silver City, N. M.; Hahnemann Medical College, Philadelphia, 1912; aged 31; died at his home, January 11.

Robert J. Arnold, Hampton, Ga.; Eclectic Medical Institute, Cincinnati, 1883; aged 56; died at his home, March 14, from pneumonia.

John H. Wilder ⊕ Hooks, Texas; Chattanooga (Tenn.) Medical College, 1893; aged 51; died in El Paso, Texas, April 20.

⊕ Indicates "Fellow" of the American Medical Association.

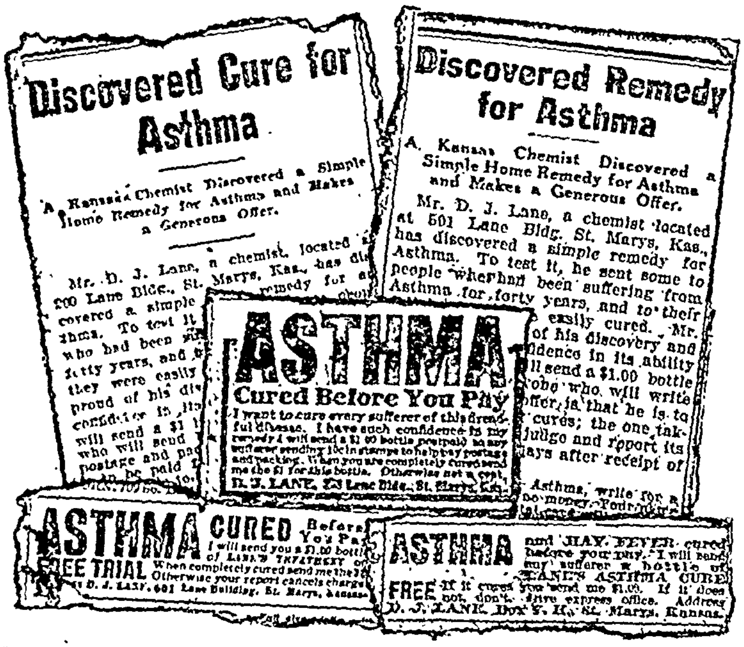
The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

LANE'S ASTHMA CURE

In certain cheap weeklies and in some not-too-particular newspapers, one may find advertisements in large black-faced type announcing: "Asthma Cured Before You Pay," in which D. J. Lane, St. Marys, Kan., offers to "send you a $1.25 bottle of Lane's Treatment on free trial." Other advertisements headed either "Discovered *Cure* for Asthma," or "Discovered *Remedy* for Asthma," as the advertising rules of the publication may require, assert that a "Kansas Chemist" has discovered a "simple home remedy for asthma" which has "easily cured" those "who had been suffering from asthma for forty years."

In earlier days, "Lane's Asthma Treatment" used to be "Lane's Asthma Cure," and long after the federal Food and Drugs Act was enacted, which penalizes false claims made on the trade package, the same false claims were made in other advertising paraphernalia—not subject to the law—which Lane used in his mail-order quackery.



Discovered Cure for Asthma

A Kansas Chemist Discovered a Simple Home Remedy for Asthma and Makes a Generous Offer.

Mr. D. J. Lane, a chemist, located at 200 Lane Bldg., St. Marys, Kas., has dis-covered a simple remedy for as-thma. To test it who had been su forty years, and they were easily proud of his dis confidence in its will send a $1 who will send postage and pa be paid

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Mr. D. J. Lane, a chemist located at 501 Lane Bldg. St. Marys, Kas., has discovered a simple remedy for Asthma. To test it, he sent some to people who had been suffering from Asthma for forty years, and to their easily cured. Mr. of his discovery and dence in its ability ll send a $1.00 bottle who will write offer is that he is to cures; the one tak- judge and report its days after receipt of Asthma, write for a no money.

ASTHMA
Cured Before You Pay

I want to cure every sufferer of this dreadful disease. I have such confidence in my remedy I will send a $1.00 bottle postpaid to any sufferer sending 10c in stamps to help pay postage and packing. When you are completely cured send me the $1 for this bottle. Otherwise not a cent.
D. J. LANE, 233 Lane Bldg., St. Marys, Kan.

ASTHMA CURED Before You Pay
FREE TRIAL
I will send you a $1.00 bottle of LANE'S TREATMENT on When completely cured send me the $1 Otherwise your report cancels charge
D. J. LANE, 601 Lane Building, St. Marys, Kansas

ASTHMA and HAY FEVER cured before you pay. I will send any sufferer a bottle of LANE'S ASTHMA CURE
FREE If it cures you send me $1.00. If it does not, don't. Give express office. Address D. J. LANE, Box Y, K., St. Marys, Kansas.

Reproductions (reduced) of advertisements of Lane's Asthma Cure of various dates.

"Lane's Treatment" was purchased and submitted to the A. M. A. Chemical Laboratory. The chemists' report follows:

CHEMISTS' REPORT

"Lane's Treatment, Double Strength, for Asthma and Hay Fever," a specimen of which was recently examined in the A. M. A. Chemical Laboratory, was a brown liquid containing suspended matter, and having an aromatic odor and a bitter, gentian-like taste. The specific gravity of the liquid was 1.0471. "Twelve and a half per cent. of alcohol, or less," was declared on the label. Qualitative tests indicated the presence of alcohol, calcium, iodid, sugar and vegetable extractives. Most of the sugar present was in a form which directly reduced Fehling's Solution (such as glucose), although a small amount had the characteristics of sucrose (cane or beet sugar). In an older specimen, which had been in the A. M. A. files for some time, the sugar was wholly sucrose. No alkaloidal or emodin-bearing (laxative) drugs were present. Quantitative determinations gave the following results:

	Per Cent.
Alcohol, by volume	11.30
Calcium (Ca^{++}), by weight	0.59
Iodin (present as Iodid-I^-), by weight	3.26
Ash, by weight	2.05
Sugar (Direct Reduction calculated as dextrose), by weight	5.93
Total Sugar (After Inversion calculated as dextrose), by weight	6.36

The examination indicated that each 100 c.c. (approximately 3⅓ fluidounces) contained 11.3 c.c. (about four teaspoonfuls) of alcohol, 3.96 grams (60.8 grains) of anhydrous calcium iodid (CaI_2) and 6.66 grams (about 102 grains) of sugar, chiefly dextrose.

It will be seen by the chemists' report that Lane's "wonderful discovery for asthma" is essentially a solution of iodids in alcohol and water with vegetable extractives. Each dose of Lane's preparation contains approximately 2.5 grains of calcium iodid. This gives a daily dosage which is equivalent to 11.3 grains of potassium iodid. Iodids, of course, have been used for years by the medical profession in the treatment of certain forms of asthma. Under careful supervision the use of iodids in selected cases of asthma may give satisfactory results. Self-dosing with iodids, however, especially in cases in which the conditions may or may not indicate this drug, is by no means free from danger. Long continued use or overdosing may bring about symptoms of iodism with edematous conditions of the larynx that may seriously interfere with respiration, even to the point, occasionally, of necessitating tracheotomy and in rare instances, causing death. Even where the symptoms are not so severe there may be skin eruptions, frontal headache, sore throat, neuralgic pains, anemia, etc. It is hardly necessary to say that in the exploitation of Lane's nostrum there is no warning of such danger.

Correspondence

THE ADMINISTRATION OF ARSPHENAMIN

To the Editor:—It appears that there is a lamentable want of care on the part of many physicians who administer arsphenamin as to the concentration of the drug used and the time required for administration.

The Hygienic Laboratory receives many complaints in regard to untoward results from the administration of arsphenamin made by various American producers. When careful investigation is made it is almost invariably found that the drug has been used in a solution that is too concentrated, and that it has been administered too rapidly. We have reports of a dose of 0.4 gm. being given in a volume of as little as 25 c.c. and injected within thirty seconds. Such practice is abuse, not use, of a powerful therapeutic agent.

If, in addition to the usual precautions as to the use of perfect ampules and neutralization, physicians would give the drug in concentration of not more than 0.1 gm. to 30 c.c. of fluid and allow a minimum of two minutes for the intravenous injection of each 0.1 gm. of the drug (in 30 c.c. of solution) the number of reactions would be very materially reduced. This would necessitate from 30 to 180 c.c. of the solution for the doses usually given and would require from six to twelve minutes for the injection.

Any physician who fails to observe these precautions should be considered as directly responsible for serious results that follow the improper use of the drug.

G. W. McCoy, M.D., Washington, D. C.
Director, Hygienic Laboratory, U S. P. H. S.

[Note.—The United States Public Health Service has issued a circular to its officers concerning the proper mode of administering these preparations. It is appropriate to reproduce this circular in connection with the letter of Dr. McCoy. Careful attention to the letter and the following points from the circular mentioned will undoubtedly reduce the number of reactions following the use of arsphenamin preparations.]

OPENING OF THE AMPULE

The ampule, before opening, should be immersed in 95 per cent. alcohol for fifteen minutes, so as to detect any crack or aperture not primarily recognizable. (Should such a breach be discovered, the contents of the ampule should be discarded.)

ARSPHENAMIN

(1) Solution: Cold, boiled, freshly distilled water should be used in all cases except in the case of "arsenobenzol" made by the Dermatological Research Laboratory, in which case hot water is required. No more solution should be prepared at one time than can be given in thirty minutes.

(2) *Neutralization and Alkalinization of the Above Solution:* With a graduated pipette or burette add 0.9 c.c. of normal NaOH for each 0.1 gm. of the drug (i. e., 5.4 c.c. for each 0.6 gm.). The alkali should be added all at once and should quickly convert the acid salt solution of arsphenamin into the alkaline salt solution, or the disodium of salt of the arsphenamin base The solution of arsenobenzol, which is hot, should be cooled before adding the alkali. This represents slightly more alkali than just enough to redissolve the precipitate formed by the addition of this reagent.

The alkali used should be standardized against normal acid. Normal NaOH is a 4 per cent. solution of the c.p. product. However, if made on the basis of weight, it may be considerably less than this strength, hence the necessity for titration. It could be made up in amount sufficient for a month's use, if kept in a well-stoppered bottle and exposed to the air for only a few seconds at a time when using the solution. It should be kept in a bottle that has been used for NaOH solution for some time so that all action it might cause on the glass has already occurred. Where it is impossible to have this made up at the station, it will be furnished on request from the Hygienic Laboratory. Should the NaOH solution become cloudy or contain a precipitate, it should be discarded.

(3) *Concentration of the Drug:* It is desired to emphasize the fact that the concentration of the drug should not be greater than 0.1 gm. to 30 c.c. of final solution. The practice of using concentrated solution is not only in direct conflict with the instructions on the circular, but carries a distinct hazard to the patient.

(4) *Method of Infection:* The gravity method only should be used. Where several patients are to be injected from the same solution, the container for the solution should be graduated. If not already graduated, this can be done in a few minutes by sticking on a strip of adhesive plaster and marking the graduations on this. A convenient way to do this is to have each mark represent 30 c.c. with a long mark for each 180 c.c.; then, if the volume is made up so that each 0.1 gm. of drug is contained in each 30 c.c., the doses can be given accurately. It is a great convenience to have a glass stopcock near the glass tubing which serves as a window just above the needle in order to control the rate of injection. If no stopcocks are at hand, the rate can be controlled by the size of the needle and the height of the column of fluid. A No. 18 or 20 B&S gage is the best size needle.

(5) *Rate of Injection:* Operators should pay particular attention to the rate of administration and in no case exceed 0.1 gm. of drug (30 c.c. of solution) in two minutes. This point is especially emphasized because it is believed that excessive rapidity of administration accounts for more unfavorable results in the use of arsphenamin than any other one thing.

NEO-ARSPHENAMIN

The principal precautions to be observed in the administration of neo-arsphenamin are:

(1) But a single ampule should be dissolved at a time. This drug must not be dissolved in bulk to be given to a series of patients.

(2) Cold water only should be used.

(3) The dilution should be not stronger than 0.1 gm. of the drug in 2 c.c. of freshly distilled water.

(4) A very small needle should be used, and the time of injection of the dose should be not less than five minutes.

SMITH COLLEGE TRAINING SCHOOL FOR SOCIAL WORK

To the Editor:—May I call the attention of your readers to a new opportunity for the intensive training of medical-social workers—the new Smith College Training School for Social Work?

Every hospital of importance in the country now employs or knows it ought to employ social workers to attend to that fringe of nonmedical needs that surrounds certainly 40 per cent. of the patients in free hospitals. Medical problems are so closely enmeshed with mental, moral, financial, industrial, racial and domestic problems, that we really cannot cure most of our hospital patients (and especially outpatients) without the help of the right sort of woman who will help us to understand and to mitigate the mass of ignorance, fear, bad habit, resourcelessness and poverty which still weigh them down even after they have been scientifically diagnosed and treated.

Such a woman must first be born to the job and then trained for it. The training referred to above begins this summer, and as chairman of the Advisory Committee on this work at Smith College, I want to make known its opportunities as widely as I can. I will answer or get answered any inquiries regarding it.

RICHARD C. CABOT, M.D., Boston.

IDENTITY OF THE POPPY IN FLANDERS FIELDS

To the Editor:—The inquiry concerning the nature of the poppies in "Flanders Fields" leads me to call attention to the fact that these flowers have been a feature of the region for centuries, for Macaulay, in his History of England, in speaking of the battle-field of Landen (during the reign of William III of England), says: "The next summer the soil, fertilized by twenty thousand corpses, broke forth into millions of poppies. The traveler who, on the road from St. Tron to Tirlemont, saw that rich sheet of scarlet spreading from Landen to Neerwinden could hardly help fancying that the figurative prediction of the Hebrew prophet was literally accomplished; that the earth was disclosing her blood and refusing to cover the slain."

HENRY LEFFMANN, M.D., Philadelphia.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

PEPSODENT

To the Editor:—Please give me an opinion concerning the dentifrice "Pepsodent." It seems very gritty to me, and I wonder whether the abrasive used will not be injurious to the teeth. The manufacturer claims it to be precipitated calcium phosphate. The pepsin contained is said to be "activated" by some agent other than an acid. A recommendation by the Carr School of Preventive Dentistry and Medicine at 30 N. Dearborn St., Chicago, is published. Is it a school whose recommendation is authoritative?

EARL H. CORNELL, Oakland, California.

ANSWER.—The keynote of the "Pepsodent" advertising is the claim that, used as a dentifrice, it will digest or dissolve the dental mucin plaques through the action of pepsin which has been incorporated in the paste. The acid medium necessary for the activation of the pepsin is claimed to be acid calcium phosphate; the abrasive substance said to be used is tricalcium phosphate. Pepsodent has been exhaustively studied by Dr. William J. Gies and his collaborators in the Biochemical Laboratory of the Schools of Medicine and Dentistry of Columbia University. Dr. Gies in a letter published in THE JOURNAL, April 28, 1917, briefly summarizes the findings of this investigation. Regarding the alleged digestive powers of Pepsodent, Dr. Gies wrote:

> "We have found that none of these digestive claims is warranted in any degree. 'Pepsodent' is devoid of the digestive power on dental mucin plaques that is commercially ascribed to it. Mucin plaques cannot be digested from teeth by any advertised use of 'Pepsodent.' There is about as much common sense in the proposed application of 'Pepsodent' for this purpose as there is in the oral administration of a few grains of lactopeptin to improve impaired tryptic digestion in the intestine."

A complete report of the investigation of Dr. Gies and his collaborators appeared in *The Journal of the Allied Dental Societies*, September, 1917. The investigation showed that the acidity of Pepsodent is due largely, if not entirely, to acid calcium phosphate. The claim by the Pepsodent concern that the use of this preparation stimulates the production of saliva is true. It does stimulate the flow of saliva to an extent that speedily neutralizes the very feeble acid present in Pepsodent. Thus, any possible influence that this "acid" might otherwise exert is, as Dr. Gies says, "promptly and completely nullified." As to whether the abrasive used in Pepsodent is injurious to the teeth, Dr. Gies reported that it appeared "to be devoid of harmful mechanical influence on dental enamel" in the ordinary use of the preparation as a dentifrice. He added: "We are not positive on this point, however."

The "Carr School of Preventive Dentistry" seems to be operated by one C. M. Carr, who has invented a set of dental instruments, and has devised what seems to be called the "Carr Treatment." The treatment and the instruments it appears are for use in cases of pyorrhea alveolaris. According to the catalog, the "Course of Prevention, including the cure of Pyorrhea" is completed in four weeks and costs $175. A call at 30 North Dearborn Street disclosed empty rooms where the "Carr School of Preventive Dentistry" had been. Inquiry as to where the "school" now is evoked the enigmatical reply that it was "going out West for a few months."

MORTALITY FROM TUBERCULOSIS IN JAPAN—LACTATION IN JAPANESE WOMEN — DAIRYING IN JAPAN

To the Editor:—1. Is it true that the mortality from tuberculosis in Japan is very low—much lower than in the United States? 2. Do the Japanese children nurse until they are five or six years old? 3. Is Japan a cowless nation?

M. E. J., Calif.

ANSWER.—1. According to the 1911 report of the Imperial Japanese Institute for Infectious Diseases the number of soldiers and sailors discharged each year on account of tuberculosis has markedly increased in recent years. According to the reports of various life insurance companies, out of 100 deaths from 20 to 25 per cent. were due to tuberculosis. Reports from textile factories show a relative mortality of from 25 to 43 per cent., silk factories having the heaviest mortality. According to the statistics of the three years 1906-1908, 30 per cent. of all deaths among factory workers were due to pulmonary tuberculosis, 12 per cent. to diseases of a seemingly tuberculous nature, and 6.4 per cent. to tuberculosis of other organs than the lungs. Accordingly nearly 50 per cent. of all deaths were in some way connected with tuberculosis. It is stated in the report of the Imperial Japanese Institute that the mortality from tuberculosis in Japan seems to agree closely with the results of the investigations made by Baumgarten and Orth in Germany. The incidence of tuberculosis in Japan does not therefore seem to differ materially from that in the United States.

2. Japanese women are noted for their ample supply of milk, although this is said to be on the decrease in recent years. They often nurse their children three years and over—even seven years occasionally. The reason commonly assigned is peculiar, namely that the Japanese mother thinks that by nursing her child for so long a period she gains better control over the child, not only during the actual period of lactation but during the following years, as well.

3. Japan is fairly well supplied with dairy cattle. It is, however, doubtful if the quality of the herds ranks as high as in Switzerland, Denmark and some portions of our own country. The reasons for the long nursing of children are not to be sought in the scarcity of cows but rather in the peculiar ideas that the Japanese entertain of the family.

CESSPOOLS, INFECTED VEGETABLES AND TYPHOID

To the Editor:—1. Will you kindly give me some information concerning cesspools? Have typhoid epidemics been traced to this source? 2. Is it true that cases of typhoid have been traced to vegetables that have been fertilized with night soil?

A. E.

ANSWER.—1. There is no doubt that a proper mode of disposal of human excrement by water carriage leads to a reduction in the amount of typhoid fever. Chapin states that in Providence, R. I., the disease fell off 40 per cent. after most of the privy vaults were abolished. Many other American cities and also many English cities have had similar experience. A number of references are given by Chapin in "Sources and Modes of Infection" (John Wiley & Sons, New York, 1912), p. 180. 2. With regard to the possibility of typhoid infection through vegetables, a discussion of this subject with references and a report of original work has been given by Melick (*J. Infect. Dis.* **21**:28-38, 1917).

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARKANSAS: Little Rock, May 13. Sec. Eclectic Bd., Dr. C. E. Laws, 803½ Garrison Ave., Ft. Smith; Sec. Regular Bd., Dr. T. J. Stout, Brinkley.

CALIFORNIA: San Francisco, June 23-26. Sec., Dr. Charles B. Pinkham, 904 Forum Bldg., Sacramento.

DELAWARE: Wilmington, June 17-19. Sec., Dr. H. W. Briggs, 1026 Jackson St., Wilmington.

FLORIDA: Jacksonville, June 16-17. Sec., Dr. W. M. Rowlett, Citizens Bank Bldg., Tampa.

GEORGIA: Atlanta and Augusta, June 5-6. Sec., Dr. C. T. Nolan, Marietta.

HAWAII: Honolulu, May 12. Sec., Dr. J. R. Judd, Beretania St., Honolulu.

ILLINOIS: Chicago, June 16-19. Supt. of Registration, Mr. F. C. Dodds, Springfield, Ill.

KANSAS: Topeka, June 17. Sec., Dr. H. A. Dykes, Lebanon.

MASSACHUSETTS: Boston, May 13-15. Sec., Dr. Walter P. Bowers, Room 501, No. 1 Beacon St., Boston.

MICHIGAN: Ann Arbor, June 10-12. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

MINNESOTA: Minneapolis, June 3-6. Sec., Dr. T. S. McDavitt, 741 Lowry Bldg., St. Paul.

MISSISSIPPI: Jackson, June 24-25. Sec., Dr. W. S. Leathers, University.

MISSOURI: St. Louis, June 9-11. Sec., Dr. George H. Jones, State House, Jefferson City.

NATIONAL BOARD OF MEDICAL EXAMINERS: Philadelphia, June 2-7. Sec., Dr. J. S. Rodman, 1310 Medical Arts Bldg., Philadelphia.

NEW JERSEY: Trenton, June 17-18. Sec., Dr. Alex. MacAlister, 438 E. State St., Trenton.

NEW YORK: Albany, Buffalo, New York and Syracuse, May 20-23. Mr. George M. Wiley, director, Exam. and Inspections Div., State Edu. Bldg., Albany.

NORTH CAROLINA: Raleigh, June 23. Sec., Dr. H. A. Royster, 423 Fayetteville St., Raleigh.

OHIO: Columbus, June 3-6. Sec., Dr. H. M. Platter, State House, Columbus.

SOUTH CAROLINA: Columbia, June 10. Sec., Dr. A. Earle Boozer, 1806 Hampton St., Columbia.

TENNESSEE: Knoxville, Memphis and Nashville, June 13-14. Sec., Dr. A. B. De Loach, Exchange Bldg., Memphis.

TEXAS: Austin, June 24-26. Sec., Dr. M. F. Bettencourt, Mart.

VERMONT: Burlington, June 26-28. Sec., Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 17-20. Sec., Dr. J. W. Preston, 215 S. Jefferson St., Roanoke.

WISCONSIN: Milwaukee, June 24-26. Sec., Dr. J. M. Dodd, 220 E. 2nd. St., Ashland.

GRADUATE MEDICAL INSTRUCTION IN LONDON

The *British Medical Journal* of March 8, 1919, contains an editorial referring to an article by Sir Wilmot Herringham on medical education in London.

This article compares the "hopelessly deficient" postgraduate instruction in London with the "attractions" Vienna and Berlin possessed when they were drawing medical graduates from all over the world. These attractions of Vienna and Berlin in substance are given as follows:

(*a*) Coaching classes, which are given by men who are unquestionably well qualified since they are those who are in line for professorial chairs.

(*b*) Opportunities for gaining skill in the use of clinical instruments, such as the laryngoscope, otoscope, ophthalmoscope, etc.

(*c*) The possibility of obtaining an appointment as assistant to a professor of surgery, thereby gaining a large experience in operations.

(*d*) The chance of obtaining a place in a professor's laboratory, where, although the work might be monotonous, he would learn the methodical system of work for which the German was justly famed.

(*e*) The uniformly instructive lectures given by the professors (as compared with the average lecture given in London).

The enumerating of these "attractions" in Vienna and Berlin was evidently intended to reveal in contrast the needs of postgraduate education in London.

A special difficulty in the development of graduate education in London is shown to be the development in the middle of the nineteenth century of a large number of special hospitals, due to the fact that "specialism was disdainfully regarded by most teachers in the medical schools." The writer shows that "something was due to the public, who insisted on having specialists," but that every department of medicine was growing so complex that "no man could any longer pretend to be expert in them all." The consequence was that all large general hospitals had special departments and the Royal Society of Medicine had thirteen special sections. The editorial states, however, that there has come to be a general recognition of the need for specialization in practice, the result of which is "that the chief special hospitals are now largely staffed by men who are members also of a staff of a school hospital."

It is stated that in making plans for postgraduate courses, which are about to be resumed in Edinburgh, the committee has arranged to pool the hospital resources. The courses will be held at four large hospitals, and "the members will hold temporary appointments as assistant demonstrators in the practical courses and as clinical assistants in the wards and special hospitals."

In the emergency facilities provided in London through a fellowship of medicine, all medical school hospitals are included, as well as a like number of special hospitals. "The instruction referred to will include general courses and special courses." By the latter is meant courses in certain classes of disease, for example, disorders of digestion. "After attending a special course the graduate would be eligible for research work in the subject or to hold a post as clinical assistant," a plan not hitherto commonly carried out. Attention is called also to "the necessity of opening clinical appointments in London to stranger graduates," and "the establishment of a special graduate hospital to which all the resident and junior appointments would be held by the visitors to London" is favored. The editorial urges that three points be more fully considered, namely, (*a*) the desirability of arranging graduate courses at teaching hospitals; (*b*) the best way of utilizing special hospitals, and (*c*) the opening of clinical appointments to graduates. The editorial concludes that "the proposed graduates' association will need a building in central London containing offices for the secretarial staff, a library, and recreation and luncheon rooms. At this center the business of the proposed permanent association would be conducted, fees would be received and paid and information supplied to graduates attending or desiring to attend the courses."

Case Records and Their Use

Two pamphlets dealing with hospital case records and forms have been issued recently by the American College of Surgeons.[1] One emphasizes the importance of keeping proper records in a hospital, explains in detail why they are important and gives suggestive outlines showing what might be included in such records. Records are shown to be the best means by which an accurate check can be kept on the various members of the hospital staff and by which faulty methods may be traced and promptly corrected. The other pamphlet suggests forms of blanks which may be used for recording the personal history and the physical examination, forms to be used in the various specialties, blanks for recording laboratory findings and treatment, and a temperature chart. A form for a summary card is also suggested, which is intended to be filled out after the patient has left the hospital, and by means of which the end results may be reviewed without revealing the name of either the physician or the patient. These pamphlets should have a wide distribution among hospitals and will doubless be of much value.

District of Columbia January Examination

Dr. Edgar P. Copeland, secretary of the Board of Medical Supervisors of the District of Columbia, reports the oral and written examination held at Washingon, Jan. 14-16, 1919. The examination covered 16 subjects and included 80 questions. An average of 75 per cent. was required to pass. Seven candidates were examined, all of whom passed. Four candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
George Washington University (1916) 82.4; (1917) 75.5, 83.5; (1918) 81; 86.4.		
University of Maryland	(1918)	85.7
Hahnemann Med. Coll. and Hosp. of Philadelphia	(1918)	80.2

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Georgetown University	(1898)	Virginia
Howard University	(1912)	Virginia
University of Maryland	(1913)	Georgia
Starling Medical College	(1892)	Ohio

Book Notices

WAR SURGERY OF THE ABDOMEN. By Cuthbert Wallace, C. M. G., F. R. C. S., M.B., Surgeon St. Thomas' Hospital. Cloth. Price, $3 net. Pp. 152, with 26 illustrations. Philadelphia: P. Blakiston's Son & Co., 1918.

This little monograph of 150 pages contains "the experiences of abdominal surgery of a sector of the battle line over a period of thirty months" and "is founded on the practice of many surgeons working under different conditions and in different hospitals. The personal equation and influence of locality have thus been largely eliminated."

There is really little fundamental difference between war surgery and peace surgery. "It is a question as to whether war conditions allow the surgeon to apply the principles that he knows to be right." "War surgery is largely concerned in overcoming adverse circumstances and in striving to make war conditions as much like peace conditions as possible." War does not change the principles of surgery, it only changes the conditions under which the principles must be applied, and as the conditions are often such as to make it impossible to follow the best surgical methods, one must learn to do the best one can under the conditions present, and that is war surgery.

The question as to whether wounds of the abdomen should be operated on or not is thoroughly discussed. The evidence presented shows conclusively that it is not so much a question of procedure as it is a question of time and conditions. Because a man recovers after a bullet wound traversing the abdomen is no evidence that any of the hollow organs were injured. On the contrary, the fact that he recovered is almost certain evidence that none of the hollow organs was injured. That a bullet may traverse the abdominal cavity in any direction and not injure the hollow viscera is well shown by the remarkable chart, Figure 6. This chart ought to convince anyone of the necessity of being most conservative in claiming that bullet wounds of the intestinal tract may heal spontaneously. Patients that recover spontaneously after a bullet wound of the stomach or intestine are exceedingly few indeed. "Experience has shown the wisdom of operating as a routine measure, and it is now mainly a question of excluding the cases on which it is best not to operate.

"On the whole 'look and see' is a better maxim than 'wait and see.'"

After discussing the subject in general, wounds of particular organs are taken up more in detail. Many interesting tables showing number, location, and character of wounds, with results of treatment, are appended.

THE HEARTS OF MAN. By R. M. Wilson, M.B. Cloth. Price, $2. Pp. 182, with 117 illustrations. New York: Oxford University Press, 1918.

Quoting from the preface, we find "the prime object of the book is to encourage investigation into certain phenomena of the circulation and of the nervous system which have not hitherto been clearly investigated from the purely clinical standpoint—for example, the mechanism of breathing in effort and at rest, the meaning and effect on the general circulation of the great blood lakes of the skin, abdomen and lungs." Certain new notions the result of clinical observation are advanced in the sixteen chapters. These deal with such topics as reaction breathing, the function of the abdominal wall in reaction breathing, rest breathing, the ductless glands and the reaction state, the effects of epinephrin, the vagus—nerve of diastole, etc. Many of these ideas will need confirmation before they can be generally accepted but they are suggestive, stimulating and well worth careful consideration.

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[1] Bulletin American College of Surgeons, **4**: Nos. 1 and 2.

Medicolegal

Rulings and Distinction as to Liability of Hospital

(Morton v. Savannah Hospital (Ga.), 96 S. E. R. 887, 888)

The Supreme Court of Georgia, in answering questions certified to it from the court of appeals, holds, first, that the Savannah Hospital, chartered by the general assembly and invested with "all the powers, rights, privileges and liabilities incident to a corporation," is authorized and empowered to conduct an institution eleemosynary in character for the public benefit. It was not the intention of the legislature that the business so conducted might be for the pecuniary gain or benefit of its managers, officers or others.

The next question was: If the intention of the legislature was to charter said corporation for charitable purposes only, would such intention, as expressed in or to be gathered from the charter itself, fix and determine its nature and character as an eleemosynary institution, in a suit brought against the corporation by a patient on account of the alleged carelessness and incompetence of a nurse and of a servant employed by the hospital, and on account of the failure of the hospital and of the superintendent under whose charge it was operated to remove such incompetent nurse after her incompetence became known and prior to the injury, notwithstanding allegations in the petition of the plaintiff in said action that "the said Savannah Hospital, conducted at Savannah, Ga., a hospital for pecuniary gain, and the greater portion of said hospital was set aside by its officers for the reception and treatment of patients who were charged for its services and who paid for the same"? The answer is that the intention of the legislature in chartering the Savannah Hospital is fixed and determined by the acts of the general assembly. In a suit brought against the corporation by a patient, as stated in this question, the charter provisions are controlling, notwithstanding allegations in the petition of the plaintiff as stated above.

Then the question was propounded whether, if the Savannah Hospital was chartered as a charitable institution, but nevertheless the greater portion thereof was set aside by its officers and superintendent for the treatment of patients who paid for the services they received, would this state of facts render the corporation liable to one who entered the hospital as a patient under an agreement to pay a stated sum for all necessary care, nursing, attention, control, oversight and medical treatment suitable or appropriate to her condition, for any injuries resulting to such patient on account of the negligence, carelessness or incompetence of the officers and agents of the corporation? The answer is that, under circumstances as just enumerated (although the hospital is a charity, and the general rule is that charitable funds are not to be depleted by subjection to liability for negligence), the corporation would be liable; but a recovery would be limited to the extent of income derived from treatment of patients who paid for services. With the exception just stated, an incorporated hospital, primarily maintained as a charitable institution, is not liable for the negligence of its officers and employees, unless it fails to exercise ordinary care in the selection of competent officers and servants, or fails to exercise ordinary care in retaining such officers and employees.

Where a patient in such an institution is not the recipient of its charity, but is able to pay and does pay for the services, and is injured on account of carelessness, negligence or incompetence of an officer or employee of the institution, the corporation is liable therefor; but the judgment can subject only funds derived strictly from noncharitable pay patients, and for this purpose the petition need not allege that the corporation failed to exercise ordinary care in the selection of its officers and employees or in retaining them. A judgment so recovered will not subject funds in trust for charitable purposes, unless the petition alleges that the corporation failed to exercise ordinary care in the selection of its officers and employees, or in retaining them.

Following the decision by the supreme court is one by the Court of Appeals of Georgia, Division No. 1 (on page 888), which says that, under the answers made by the supreme court, it appears that the trial judge erred in sustaining a general demurrer to the plaintiff's petition, and therefore his judgment must be reversed. Moreover, anything in the decision in *Medical College* v. *Rushing,* 1 Ga.App.468, 57 S. E. 1083, which may be in actual conflict with the holdings of the supreme court in this case, will not be followed.

Fraud in Hypnotic Treatment of Insane Delusions

(Roesler v. Shastri (Wis.), 169 N. W. R. 282)

The Supreme Court of Wisconsin reverses a judgment that was rendered on a verdict directed for the defendant, and remands for a new trial this case in which the plaintiff sought by replevin to recover a bank draft for $950 alleged to have been obtained from him through fraudulent representations by the defendant. The court says that the plaintiff was a farmer whose wife had been suffering from insane delusions for thirteen or fourteen months and had been at a hospital three times. He engaged the defendant to treat her. He testified that the defendant held himself out as a doctor, and was called such, and it appeared that the defendant had used the title M.D. on his letter heads; that he represented that he could by the use of hypnotic influences cure the plaintiff's wife, but that he must first destroy her mind, and make it like a child's and then build it up again. He assured the plaintiff that he could cure her, but he had to have $50 per day. At the end of twenty days the defendant said she was cured 50 per cent., but that he could not stay longer, and was given the draft and $50 in cash. It appeared that the defendant was a native of India; that he had been educated as a physician in the University of Binjab, and had pursued some medical studies in Chicago and Los Angeles, obtaining a medical degree from the latter school; but he had not been licensed to practice in the United States. He claimed that he used hypnotic suggestion only in his treatment of the plaintiff's wife, and denied that he had said that he could cure her.

The supreme court thinks it was error to direct a verdict in this case. It was a question for the jury to say whether or not plaintiff was deceived by the defendant. The jury had a right to believe the plaintiff's testimony, and to draw the conclusion therefrom that he was defrauded of his money. He had an insane wife; that he was anxious to cure her was evidenced by the fact that he willingly paid $50 a day in an effort to do so. He was undoubtedly ignorant of what could or could not be done through mental healing or hypnotic suggestion. There is a sharp conflict of views on that subject by those who have given it study and attention. That he did not know was not strange. Neither was it strange that he was unable to diagnose the exact or relative condition of his wife's mind at the time the draft was delivered. He had been told that her mind must first be wholly destroyed, and then built up, and he evidently believed that. The law protects the ignorant and credulous, as well as the wise and wary. He was told by the defendant, when the latter received the draft, that her mind was 50 per cent. cured, and that the nurse could take care of her afterward. We employ doctors to diagnose disease, and to cure it or direct us what to do to effect a cure. That is their profession. When they give advice, the patient is justified in following it, unless it is so palpably contrary to sense or human experience as to be disbelieved by every one.

There was sufficient evidence in this case to warrant the jury in finding that the defendant held himself out as a doctor. A letter from him to the nurse, which was shown to the plaintiff, with the heading "K. D. Shastri, M.D." and was signed "K. D. Shastri, M.D." He was called doctor, and made no protest. The fact that he was not required (in Wisconsin) to be licensed to heal by mental science or hypnotic suggestion was immaterial on the question of actual fraud. An unlicensed person may make fraudulent representations.

The plaintiff should have been permitted to show by other doctors, if he could, that the treatment given his wife by the defendant was injurious, and not beneficial. It was true that the defendant's counsel on the trial admitted that she was neither cured nor benefited. But the plaintiff's offer went farther. He offered to prove that she had been injured by the treatment. Such proof was pertinent on the issue of fraud and should have been admitted.

Claim was made that since, in delivering the draft to the defendant, the plaintiff parted with the legal title thereto, he could not maintain replevin to recover it; but this court has several times negatived that claim, and held that replevin will lie to recover goods obtained by fraud.

Witness Fees Under Workmen's Compensation Act

(Nelson v. Industrial Insurance Department (Wash.), 176 Pac. R. 15)

The Supreme Court of Washington modifies, as to the fees allowed a medical witness, a judgment that granted an award as for permanent partial disability for practical total loss of vision in the left eye. The court says that the trial judge allowed a fee of $45 to one of the medical witnesses who came from Portland, Ore., to attend the trial. It was contended that this allowance was proper under the provision of the statute that the court may allow an attorney's fee, "and the fees of medical and other witnesses and the costs shall be payable out of the administration fund, if the accident fund is affected by the litigation." But there is no provision of the law that will warrant the payment of extraordinary fees to expert witnesses as such; and the supreme court thinks that it is hardly within any rule of statutory construction to say it was the intention of the legislature to leave the fixing of witness fees to the discretion of the court. Being dependent on the statute, costs and witness fees are never to be allowed in the discretion of the trial judge, in the absence of a positive or permissive statute. It will be observed that the only discretion given to the court in the allowance of costs on appeal from an order of the department is that the trial judge may fix a reasonable attorney's fee and "such (reasonable) fee, and the fees of medical and other witnecesses . . . shall be payable," etc., plainly indicating that it was the intent of the legislature to associate medical witnesses with "other witnesses" and not with the attorney whose service is independent of the witnesses, and for which no fee is provided by law. This court has heretofore refused to extend the terms of this statute by construction. It follows that the judgment of the lower court should be modified to this extent.

Requirements for Revocation of Licenses

(Blunt v. Shepardson et al. (Ill.), 121 N. E. R. 263)

The Supreme Court of Illinois says that the power given by the civil administrative code to the department of registration and education to revoke a license to practice medicine is not arbitrary. The department cannot act except for cause shown, on notice and hearing and with an opportunity to defend. Its power to revoke the license of a medical practitioner cannot be exercised except on the action and report in writing of a majority of the five reputable physicians licensed to practice medicine and surgery in this state designated from time to time by the director of registration and education for that purpose. According to the petition in this case, no such report in writing was ever made; at least, no notice was ever given to the petitioner. He was simply advised by letter that reports of unprofessional conduct on his part had reached the board and told verbally that it had been reported to the board that he had been found guilty of violating the Harrison drug act. There was no charge, no hearing, and the letter announcing the revocation of his license did not state for which of the reasons mentioned in the medical practice act his license had been revoked or whether for any or no reason. The evidence of the granting and revocation of licenses cannot rest in parol, or verbal statements. The record must be preserved, and it is essential to the validity of an order revoking a license that it shall show the facts essential to the jurisdiction of the department. On the showing made by the petition in this case, a writ of certiorari should have been awarded to bring before the court the record of the proceedings of the department of registration and education, and its issuance is directed.

Society Proceedings

COMING MEETINGS

American Medical Association, Atlantic City, June 9-13.

American Academy of Medicine, Atlantic City, June 9-10.
American Association of Anesthetists, Atlantic City, June 9-10.
Am. Assn. of Genito-Urinary Surgeons, Atlantic City, June 16-17.
Am. Assn. of Indust. Physicians and Surgeons, Atlantic City, June 9.
Am. Assn. of Pathologists & Bacteriologists, Atlantic City, June 16-17.
American Association of Physicians, Atlantic City, June 16-17.
American Climatological & Clin. Assn., Atlantic City, June 16-18.
American Dermatological Association, Atlantic City, June 16-18.
American Gynecological Society, Atlantic City, June 14.
American Medico-Psychological Assn., Philadelphia, June 18-20.
American Neurological Association, Atlantic City, June 16-18.
American Ophthalmological Society, Atlantic City, June 16-17.
American Orthopedic Association, Atlantic City, June 16-17.
American Otological Society, Atlantic City, June 16-17.
American Pediatric Society, Atlantic City, June 16-18.
American Proctologic Society, Atlantic City, June 7-9.
American Psychopathological Association, Atlantic City, June 19.
American Society of Tropical Medicine, Atlantic City, June 16-17.
American Surgical Association, Atlantic City, June 16-18.
American Therapeutic Society, Atlantic City, June 6-7.
Arizona Medical Association, Globe, June 2-3.
Arkansas Medical Society, Little Rock, May 20-22.
Assn. of American Peroral Endoscopists, Brooklyn, June 5.
Assn. for the Study of Internal Secretions, Atlantic City, June 9.
Congress American Phys. & Surgs. of N. A., Atlantic City, June 16-17.
Connecticut State Medical Society, Bridgeport, May 21-22.
Florida Medical Association, Miami, May 20-22.
Illinois State Medical Society, Peoria, May 20-22.
Maine Medical Association, Portland, June 18-19.
Massachusetts Medical Society, Boston, June 3-4.
Michigan State Medical Society, Detroit, May 21-22.
Mississippi State Medical Association, Hattiesburg, May 13-14.
Missouri State Medical Association, Excelsior Spgs., May 26-28.
National Assn. for Study of Epilepsy, Sonyea, N. Y., June 6-7.
National Tuberculosis Association, Atlantic City, June 12-14.
Nebraska State Medical Association, Lincoln, May 19-21.
Nevada State Medical Association, Lake Tahoe, June 20-21.
New Hampshire Medical Society, Concord, May 14-15.
New Jersey Medical Society, Spring Lake, June 24-25.
North Dakota State Medical Association, Grand Forks, June 18-19.
Oklahoma State Medical Society, Muskogee, May 20-22.
Rhode Island Medical Society, Providence, June 5.
Southern Minnesota Medical Assn., Rochester, June 30-July 1.
Texas State Medical Association, Waco, May 13-15.
Western Roentgen Society, Cleveland, June 5-6.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Albany Medical Annals

April, 1919, **40**, No. 4

Physical and Mental Condition of Delinquent Boys. C. P. McCord, Albany.—p. 101.

American Journal of Diseases of Children, Chicago

May, 1919, **17**, No. 5

*Cystoscopic Study of Urologic Conditions in Children. F. Hinman, San Francisco.—p. 306.
Studies on Mammary Gland: V. Effects of Inanition on Developing Glands in Male and Female Albino Rats from Birth to Ten Weeks of Age. J. A. Myers, Minneapolis.—p. 311.
Recovery of Normal Weight in Various Organs of Albino Rats on Refeeding After Underfeeding from Birth for Various Periods. C. M. Jackson and C. A. Stewart, Minneapolis.—p. 329.
Measurements of 250 Full-Term New-Born Infants. R. Taylor, Minneapolis.—p. 353.

Cystoscopy in Children.—The findings of twenty-six cystoscopic studies done on children are reported by Hinman. The youngest patient was a girl, 11 months of age. Of twelve cases of pyuria in girls, six were acute or subacute infections and six chronic. In three of the acute and three of the chronic cases, infection was limited to the bladder; microscopic and cultural studies of the catheterized kidney urines were negative. There was cystoscopic evidence of bladder inflammation in all twelve cases. Infection was confined to the left side in two and was bilateral in four of the six pyelites. The total phenolsulphonephthalein was normal in all. *B. coli-communis* was cultivated from the urine in all but one case in which a pure staphylococcus was secured. In all of the ureteral catheterizations silver nitrate in strengths of 0.25 to 2 per cent. was used as pelvic lavage before the withdrawal of the catheters. Calculus formation was recognized four times, left nephrolithiasis in a boy of 4 years (with congenital posterior urethral valve), large urethral calculus in a boy of 5 and large bladder stones in boys of 3 and 4 years, respectively. Acute hemorrhagic nephritis occurred in two girls of 6 and 10 years. Urologic investigation with diagnosis was made of a large retroperitoneal sarcoma, a large hypernephroma and an insufficient horseshoe kidney, all of these patients coming to operation or necropsy. Three small boys, aged 3, 4 and 5 years, with symptoms of prostatism and residuals of 80, 320 and 110 c.c., have been subjected to examinations (the youngest required external urethrotomy), which revealed valvelike obstructions in the posterior urethra. Hinman emphasizes that a complete urologic study (cystoscopy and ureteral catheterization) is technically possible in children irrespective of sex or age, and that he has not met with any untoward consequences or disagreeable complications. The results in every instance have justified the procedure.

Annals of Surgery, Philadelphia

March, 1919, 69, No. 3

*Formation of Bone: The Osteoblast. L. W. Ely, San Francisco.—p. 225.
*Repair of Cranial Defects. G. E. Wilson, Toronto.—p. 230.
*Lesions Observed in Operations for Old Injuries to Spinal Cord. C. A. Elsberg, New York.—p. 239.
*Diagnosis and Therapy of Bone Typhoid. G. Bohmansson, Oerebro, Sweden.—p. 245.
Diaphragmatic Hernia: Report of Case. A. L. Soresi, New York.—p. 254.
Gas and Motility of Surgical Stomach. W. H. Barber, New York.—p. 271.
*Fatty Hernias: Report of Case of Strangulated Fatty Hernia Enveloping Empty Femoral Sac. K. Hale, Wilmington, Ohio.—p. 278.
*Anuria After Unilateral Nephrectomy. L. Frank, Louisville, Ky.—p. 286.
*Adhesive Plaster Method for Rapid Regeneration of Skin Over Granulating Wounds. E. G. Beck, Chicago.—p. 291.
*Experimental Research on Effect of Intravenous Injection of Gum Salt Solutions. P. H. DeKruif, U. S. S. C.—p. 297.
*Treatment of Burns. A. L. McDonald, Duluth, Minn.—p. 312.
Initial Treatment of War Wounds Involving Knee Joint. C. R. Metcalf.—p. 318.
*Case of Suppurating Cyst of Urachus, with Concretion. W. G. Ward, East Lynn, Mass.—p. 329.

Formation of Bone by Osteoblast.—The neoplastic theory of bone formation is endorsed by Ely. The osteoblast is the bone-building cell. Neither periosteum nor marrow is necessary for bone formation; neither of them forms bone, in the proper meaning of the word. In each tissue the conditions are right for bone formation. The materials are there, and, given the stimulus, physiologic or pathologic, bone will be manufactured out of the fibrous tissue of the periosteum, or out of the fibrous or cartilaginous tissue in the marrow. The presence of bone is to a certain extent a stimulus for further bone formation. The true marrow cells, the characteristic marrow cells, probably have no function in bone building whatever.

Repair of Cranial Defects with Rib Transplants.—In the cases reported by Wilson, pieces of rib and cartilage were used for transplants into cranial defects according to the method used by Primrose of Toronto.

Lesions Observed in Operations for Old Spinal Cord Injuries.—Twenty operations were done by Elsberg for spinal lesions due to old fractures or wounds of the vertebral column. Of these patients, eight were completely relieved of their symptoms, and six were greatly improved. In six there was little or no improvement.

Diagnosis and Therapy of Bone Typhoid.—By means of bacteriologic examinations of bacteria obtained from isolated foci, Bohmansson believes he has succeeded in proving the typhoid nature of typhoid complications in the bone system when no clinical support for such a diagnosis existed. He also believes that multiple typhoid bone foci are probably commoner than is shown by statistics. Systematic roentgenray examination is urged for the entire skeleton in isolated bone foci, in order to determine the treatment, although the diagnosis can be made with certainty only by means of bacteriologic examination of the foci discovered. Single foci are quickly and securely accessible for direct operative treatment. Autogenous therapy was tried by Bohmansson in one case without discomfort to the patient, and with apparently good results. There seems to be good reason for continued experimentation in this direction.

Fatty Hernias.—Twenty-three cases of fatty hernia recorded in the literature are reviewed by Hale, and he adds two personal cases. The diagnosis of these cases seems to be difficult, but treatment is the same as that of an ordinary hernia.

Anuria After Unilateral Nephrectomy.—Frank is of the opinion that not only in calculous anuria, but in the occasional suppression which follows nephrectomy, the suppression is brought about entirely through circulatory disturbances. Hence, the term reflex anuria, as indicative of some nerve connection or nervous reflex, is a misnomer. The active arterial congestion, the vascular overfilling, particularly on the arterial side, Frank says, accounts for the diminution in the urinary output in practically all cases of unilateral nephrectomy during the first few hours. As soon as the circulation on both sides in the kidney is equalized, then there is an increase in the urinary output and the kidney gradually accommodates itself to performing the function of both organs.

Adhesive Plaster Method for Dressing Granulating Wounds.—This procedure is applied by Beck in all types of granulating wounds, whether these be due to ulceration, burns, or trauma, and especially wounds produced by surgical operations. The most important field for this method, he believes, is found in the demand for skin regeneration over denuded surfaces produced in the skin sliding operation for empyema. This method is now widely employed in the treatment of the apparently hopeless cases of chronic suppuration of bones and joints, empyema, and lung abscess. The technic consists in applying strips of plain or zinc oxid adhesive plaster along the edges of the granulating wound. These strips, from one-half to three-quarters inch in width, must be so adjusted that they cover both margins, that of the skin and that of the granulating wound. This leaves the center of the granulating surface exposed for absorption of the wound secretions by a dry, sterile dressing. Twenty-four hours later the dressing and adhesive plaster are carefully removed. It will be found that along the margin of the skin there has now formed a bluish-gray border, about 2 or 3 mm. in width. This bluish-gray border represents the new growth of epithelial cells. The wound is dressed with dry gauze, which is left on for twenty-four hours, followed on the next day by another application of adhesive plaster. This procedure is repeated until the entire granulating surface is covered with epithelial growth. All necrotic tissue must be allowed to slough off, so that the base of the wound is clean. The wound must never be rubbed with gauze, as this would be apt to destroy the new epithelial cells.

Intravenous Injection of Gum Salt Solutions.—A large number of preparations of the gum salt solution made at the central laboratory of the U. S. Army Medical Department and used in resuscitation work at the front were subjected to toxicity tests in guinea-pigs by De Kruif. The aim of the experiments was to discover whether these solutions might possess the "equilibrium disturbing" effect that certain substances in the colloidal state show when injected into the circulation. With one exception no effects of an anaphylactic nature were observed. Slight symptoms of various kinds which followed the injection of massive doses of certain samples were of so little importance that they could be disregarded. The exception mentioned was that of a sample contaminated with *Staphylococcus aureus* and an unidentified bacillus. Severe effects followed the injection of this preparation. One guinea-pig succumbed with typical anaphylactic symptoms. This animal was not a normal one, but was shown at necropsy to be pneumonic. Normal harmless gums seeded with the organisms isolated from the preparation just described showed some increase in toxicity, which was not, however, as marked as that of the original sample. Out of thirty-five samples tested for sterility, three were found to be contaminated. This is a serious indictment of methods of control of sterility used by those making the gum solutions. Attempts to produce a toxic state in gum solutions by subjecting them to cold failed. Attempts to make normal rat and guinea-pig serums "anaphylatoxic" with various samples of gum did not succeed. This furnishes important confirmatory evidence of the harmlessness, as far as the anaphylactic effect is concerned, of the gum solutions.

Treatment of Burns by Sodium Bicarbonate Solution.—McDonald has found by experience that in the first aid care of extensive burns, the dressing with gauze soaked in 10 per cent. or stronger sodium bicarbonate and kept moistened is the simplest and gives greatest comfort. This is preferable to attempts at a more complicated technic. Morphin should be used to give rest but must be administered with care since there is often severe reaction and depression and the drug may do harm. Treatment of shock with posture, heat, hot drinks and stimulants may be necessary. Paraffin is much preferable to gauze with oily dressings and should be substituted as soon as possible, at least within thirty-six hours. With the use of the air pump and atomizer the method can be simplified and rendered quite painless; dressings on gauze should be abandoned. Dichloramin-T in oil is painful and of slight value. If there is extensive slough, wet dressings or antiseptic powders are preferable. The use of adhesive strappings over the raw surface is highly satisfactory and simplifies the treatment, since dressings may be extended to two or three days. The general conditions of the patient must be carefully followed and built up by stimulants, tonics or transfusions. Skin grafting is rarely necessary, nor does it offer much advantage to the healing with paraffin or adhesive.

Suppurating Cyst of Urachus.—For ten years, Ward's patient, a woman, aged 44, had had considerable discomfort from moisture in the umbilicus, which at times was very offensive, smelling like urine. She had to wear a cloth pad over the navel all the time, and every day had to cleanse the parts to prevent irritation. She was unable to walk upright on account of the pain and swelling in her navel. Her sleep was broken by severe contracting pains in the umbilical region. She had become very much depressed mentally, and had no inclination for food. On examining the abdomen, Ward found a tumor mass, round in shape, about the size of an orange, which was just below the navel, and apparently in direct contact with its lower border. The umbilical wall was somewhat elevated and reddened. The floor of the umbilicus was bathed in thin, watery pus, and an odor of urine was present. There were no signs of any abdominal complications. At operation the walls of the cyst had a fibrous, rough, gritty feel. On entering the cyst cavity, about 8 ounces of a yellowish, very fetid pus exuded. At the umbilical end of the cyst, was an oval-shaped mass, about 1½ inches long and three-quarters inch wide, and about one-half inch thick. The removal of this oval mass disclosed a very small aperture, opening directly on the floor of the umbilicus. This opening admitted the point of a fine probe. Ward swabbed out the cavity with tincture of iodin and packed with iodoform gauze. The patient began to improve in health almost immediately; the wound healed rapidly and in two weeks she was discharged.

Boston Medical and Surgical Journal

April 24, 1919, **180**, No. 17

Close Relationship Existing Between General Practitioner and Ophthalmologist and Otolaryngologist. T. H. Odeneal, Beverly, Mass. —p. 459.
*Postinfluenzal Alopecia. S. Ayres, Jr., Boston.—p. 464.
Focal Infection and Relation to Toxemia of Pregnancy With or Without Convulsions. J. E. Talbot, Worcester, Mass.—p. 469.
Treatment of Low Back Strains. H. W. Marshall, Boston.—p. 473.
Pneumonia and Empyema. H. Gray, Camp Devens, Mass.—p. 475.

Postinfluenzal Alopecia.—Twenty-five consecutive cases of alopecia following influenza are analyzed by Ayres. He claims that alopecia is a not infrequent sequel of influenza, occurring commonly about two or three months after the onset of the influenza, but occasionally during convalescence. The alopecia is usually of the diffuse type, although in one of the hospital cases and one private case the lesions were patchy, and, without a history of influenza, might have been diagnosed alopecia areata. Most of the cases which Ayres has seen have been females, twenty-one of the twenty-five consecutive cases. All of the twenty-five patients are under 36 years of age. The ultimate aim in treatment is to promote a healthy circulation of the scalp. This is attained most easily by massage, with the head lowered; by avoidance of obstruction to the main vessels of supply to the scalp by padding the hat band at appropriate points; by stimulating lotions; by keeping the scalp clean.

Journal of Cutaneous Diseases, Chicago

April, 1919, **37**, No. 4

*Keratolysis Exfoliativa. J. E. Lane, New Haven, Conn.—p. 223.
Lichen Acuminatus. S. Feldman, New York.—p. 226.
*Psoriasis and Diet. W. A. Pusey, Chicago.—p. 240.
Lichen Planus in Two Brothers. D. W. Montgomery and G. D. Culver, San Francisco.—p. 242.
Dermatology in U. S. Army: Report of Dermatologic Department, Camp Travis, Texas, for 1918. W. H. Guy, Pittsburgh.—p. 245.

Keratolysis Exfoliativa.—A considerable number of cases of this affection have come to Lane's notice. All of them were seen in the summer and all cleared up with the approach of cool weather. In several cases seasonal recurrence had been noted. The mild cases were favorably influenced by fatty applications. In a marked case the application of a mild dose of roentgen ray brings about a prompt cure.

Psoriasis and Diet.—That a restricted protein diet extending over many years may be accompanied by psoriasis is shown in Pusey's case. When the patient was a child 3 years old, she was thrown into great excitement by seeing a chicken killed, and as a result developed a complete antipathy for animal foods. Until she was 19, she ate absolutely no meat, fowl, fish, milk or eggs, except such milk and eggs as she received in breads. For the last four years she has eaten a very small amount of meats, nothing but pork chops and beef; she eats sparingly of these and only once a day, her reason being she does not care for meats. She has never eaten eggs, milk, fish or shell-fish. She has tasted eggs and milk, but as far as she knows, she has never tasted fish. She is very fond of gravies and her diet in other respects is well rounded. Pusey is convinced that her intake of animal protein is a physiologic minimum, and she is not a heavy eater of leguminous vegetables, yet she had a clear case of psoriasis.

Journal of Medical Research, Boston

March, 1919, **39**, No. 4

*Paratyphoid-Enteritidis Group. VI. Separation of Distinct Paratyphoid Group Among Strains of Rodent Origin. C. Krumwiede, Jr., E. Valentine, and L. A. Kohn, New York.—p. 449.
*Susceptibility of Naturally Nephropathic Animals to Acute Mercuric Chlorid Intoxication. W. deB. MacNider, Chapel Hill, N. C. —p. 461.
*Bacillus of Colon Group Isolated from Cystitis Urine. S. Niwa, Cambridge, Mass.—p. 469.
*Action of Benzol: V. Diphasic Leukopenia as Polynuclear Amphophile Phenomenon (Rabbit). H. G. Weiskotten and H. S. Steenland, Syracuse.—p. 485.
Rocky Mountain Spotted Fever in Domestic Rabbit. N. C. Foot, Cambridge, Mass.—p. 494.

Paratyphoid-Enteritidis Group.—Of fifteen guinea-pig strains of the paratyphoid-enteritidis group, thirteen were alike in their agglutination reactions. This apparent identity was further verified by agglutinin absorptions. Two strains from mice and one each from a rabbit and from a cat as shown by agglutinin absorption were identical with this group of thirteen guinea-pig strains. A distinct paratyphoid group of bacilli is encountered therefore in spontaneous infections from laboratory animals, especially rodents. Some of the strains from mice and guinea-pigs do not fall into the above group. Others belong agglutinatively to the *B. enteritidis* group. Evidently the host origin of a culture is not necessarily an index to its biologic position, and the classification of strains according to origin, as *B. typhi-murium* or *B. pestis-caviae*, is not justified. None of the rodent strains studied belongs to either the *B. cholera-suis* or *B. paratyphosus* "B" groups.

Acute Mercuric Chlorid Intoxication.—Fourteen naturally nephropathic animals were intoxicated by mercuric chlorid. From the results obtained by MacNider, it is evident that the kidney of the naturally nephropathic animal is very susceptible to the toxic action of mercuric chlorid, and that the toxic effect of mercuric chlorid, so far as the kidney is concerned, has been associated with the development of an acid intoxication. The severity of the acute changes occurring in the kidney have shown a correlation with the severity and duration of the acid intoxication.

Bacillus of Colon Group Isolated from Cystitis Urine.—The organism isolated by Niwa from cystitis urine is a member of the colon group which is not named, but according to McConkey is to be classified in Group II, according to Jenson-Bahr's list in Subgroup G of *B. coli*, and to be located as No. 227 of Group XV on the list published by Bergey and Deehan, 1908. In the fermentation tests with different sugars, this organism fermented dextrose, lactose, dulcite, mannite, maltose, raffinose, adonite and inulin with the production of acid and gas without any delay, whereas it did not ferment saccharose at all. Of those sugars the gas production through this organism was the strongest in mannite and maltose, and then in dulcite, lactose, dextrose and adonite, while in raffinose and inulin it was the weakest. The acidity produced by this organism in those sugar mediums was most marked in mannite, maltose, dulcite, and lactose, and then in dextrose and adonite, while in raffinose and inulin it was only feeble. This organism proved to be pathogenic and pyogenic to animals, such as the mouse and guinea-pig. The serum of the patient in question showed a strong agglutinating power to this organism. Hence Niwa suggests that this organism may be the active cause of his case of cystitis.

Action of Benzol.—The diphasic character of the leukopenia following subcutaneous injections of olive oil benzol mixture in rabbits Weiskotten and Steensland mention is mainly a polynuclear amphophile phenomenon and only to the extent of about one sixth a small mononuclear phenomenon.

Journal of Parasitology, Urbana, Ill.

March, 1919, 5, No. 3

Life History of Ascaris Lumbricoides. B. H. Ransom and W. D. Foster, Washington, D. C.—p. 93.
Cuterebra Tenebrosa Coquillet. R. R. Parker and R. W. Wells, Bozeman, Mont.—p. 100.
Development of Ascaris Lumbricoides *L.* S. Yoshida, Osaka, Japan.—p. 105.
Species of Hedruris Occurring Commonly in Western Newt, Notophthalmus Torosus. A. C. Chandler, Portland, Ore.—p. 116.
Microphallus Ovatus Sp. Nov. From Crayfish and Black Bass of Lake Chautauqua, N. Y. H. L. Osborn, St. Paul.—p. 123.
New Cystoscercous Cercaria. H. S. Pratt, Syracuse.—p. 128.
Trichomonas Intestinalis in Vitro. M. F. Boyd, Galveston, Texas.—p. 132.
*Case of Balantidium Coli Dysentery. C. W. Mason, Chieng Rung, Yunnan, China.—p. 137.

Balantidium Coli Dysentery.—Human balantidiosis is said by Mason to be less rare than is usually supposed. However, on account of the infrequent appearance of the parasites in the stools of infected persons and the absence of clinical symptoms in many of the cases, it is probable that parasitization with *Balantidium coli* is frequently overlooked in the routine examination of stools. Thirteen cases have been observed in the Philippine General Hospital. In the Bilibid Prison, thirty-five cases have been found in the last two and a half years, an average of more than one a month. *Balantidium coli* produces bacteriologically sterile abscesses in the submucosa of an infected intestine. The latency prevalent in balantidiasis of man is due chiefly to the fact that the patient, although parasitized, is not infected with *Balantidium coli*, but is in part due to the chronicity of the ulcerative process in infected cases.

Journal of Urology, Baltimore

February, 1919, 3, No. 1

*Experimental Nephropathy Produced by Organo-Mercury Compound of Phenolsulphonephthalein. J. E. Burns, E. C. White and J. G. Cheetham, Baltimore.—p. 1.
*"Forage de la Prostate" in Treatment of Prostatic Hypertrophy. G. Luys, Versailles.—p. 17.

Experimental Nephropathy.—This study was undertaken with the idea of producing acute and chronic renal lesions of varying degrees of intensity and of determining whether or not lesions could be produced more nearly resembling those found in human beings in the different types of nephritis than have been heretofore experimentally accomplished. The drug synthesized by Burns and his associates, and made use of in their experiments, is tetra-oxymercury phenolsulphonephthalein. It is prepared by the action of an excess of mercuric acetate on phenolsulphonephthalein and it contains 63 per cent. of organically bound mercury. The renal lesions produced by this drug resemble quite closely those found in the different types of nephritis in human beings. The lesions in the acute type are mainly tubular, although some slight glomerular changes have been noted. In the chronic type the most striking change was the increase of interstitial tissue both in the glomeruli and between the tubules, together with areas of tubular obliteration and of glomerular fibrosis. Chemical examination of the blood and urine showed results quite analogous to the type of lesions produced. This organo-mercury compound has, as was anticipated, produced these marked renal lesions without producing lesions elsewhere in the body in the chronic type, and in the acute type the lesions other than renal have been insignificant and in no case responsible for the death of the animal.

"Forage de la Prostate" in Treatment of Prostatic Hypertrophy.—This treatment has as its object the gouging out of a tunnel from the interior of the gland through the natural channels, in such a way as to permit free escape of urine. "Forage de la Prostate" a surgical intervention carried out under direct ocular observation was originated by Luys in 1914. A direct vision cystoscope and the galvanocautery are used. Luys says that the method has given absolutely satisfactory results. These good results are durable as well as immediate.

Maryland Medical and Chirurgical Faculty Bulletin, Baltimore

April, 1919, 11, No. 7

Medical Library. J. Ruhräh, Baltimore.—p. 148.

Medical Record, New York City

April 26, 1919, 95, No. 17

*Pneumonia and Empyema at Camp Merritt in Winter of 1917-1918. E. H. Schorer, F. D. Clark, R. Sanderson, J. D. Dickson, and F. M. Huntoon, Hoboken.—p. 673.
Influenza Aboard Man-of-War. F. M. Harrison, U. S. N.—p. 680.
Analysis of Two Hundred and Sixteen Industrial Accidents. C. Scheffer, Boston.—p. 685.
Scopolamin-Morphin in War Surgery. C. W. Strobell, New York.—p. 687.

Pneumonia and Empyema at Camp Merritt.—Pneumonia of three types, lobar, bronchopneumonia, and combinations of the two, were observed by the authors at Camp Merritt. Many of the cases were what MacCallum, Cole, and their co-workers have called interstitial bronchopneumonia, but of these very few followed measles or other contagious diseases. Empyema was the most frequent and serious complication. Of 181 pneumonia patients whose sputum was examined, eighty-one had fluid in the chest; and of these, fifty-six had a purulent pleural exudate. Hemolytic streptococci were found in 51.9 per cent. of the pneumococcus sputums, 53.7 per cent. of the pleural exudates, and 70.4 per cent. of the purulent pleural fluids. Thirty-four per cent. of straight pneumococcus pneumonias were complicated by chest fluid and 25 per cent. by empyema; 26.3 per cent. of pneumococcus and hemolytic streptococcus pneumonias were complicated by chest fluid and 24.9 per cent. by empyema; 15 per cent. of pneumococcus and nonhemolytic streptococcus pneumonias were associated with pleural fluid and 7.5 per cent. with empyema; 26 per cent. of all pneumonias in which pneumococci played a part had chest fluid and 20 per cent. had empyema. Hemolytic streptococcus pneumonia was complicated in 37.3 per cent. of the cases by chest fluid and in 25.4 per cent. by empyema. In spite of the fact that in the 116 cases of pneumonia in which type pneumococci were found, twenty-two of the twenty-six empyemas were caused by hemolytic streptococci. Three empyemas caused by pneumococci were found in patients in whose sputum no pneumococci were found. The authors believe that the hemolytic streptococci are seldom the primary cause of pneumonia, but that usually they assume an important and principal part in the final result of the cases of pneumonia.

Some of the hemolytic streptococci, or at least a portion of the organisms, are bile soluble, this factor being precipitinogenic. According to ability to ferment different sugars, the hemolytic streptococci causing empyema may be divided in four groups. If these groups be accepted, there is further argument for the belief that the streptococci are not the primary cause of the pneumonia, but are secondary invaders. These streptococci have a large common group factor in producing precipitin, but also contains specific precipitinogenic groups. The authors maintain that in the treatment of hemolytic streptococcus empyema drainage is necessary, the time for this being determined by the condition of the patient. Active immunization by the injection of autogenous vaccine seems to be of value in some cases. In many hospitals routine leukocyte counting on the first and tenth days of pneumonia, and on the first, second, third and tenth days after operation for empyema, has proved to be of value. This does not preclude leukocyte counting at any other time if indicated.

Modern Hospital, Chicago

April, 1919, **12**, No. 4

Navy Base Hospital Overseas. L. W. Johnson and R. V. Miller, U. S. N.—p. 231.
Application of Hotel Service to the Hospital. H. V. Pettit, Ottawa, Ill.—p. 238.
Department of Anesthesia at Royal Victoria Hospital, Montreal. W. H. Howell, Montreal.—p. 240.
Care of Infectious Diseases in Hospitals. D. L. Richardson, Providence, R. I.—p. 244.
Municipal Contagious Disease Hospital of City of Chicago. M. J. Robinson, Chicago.—p. 246.
Converting Department Store into Hospital.—p. 248.
Living-Out Versus Living-In for Hospital Employees. L. R. Curtis, Chicago.—p. 253.
Hospital Accounting. C. A. Porter and H. K. Carter, Chicago.—p. 255. To be continued.
First Training School for Native Nurses in Haiti. L. D. Jordan, U .S. N.—p. 273.
Dispensaries and Their Service to the Public. M. M. Davis, Boston. —p. 274.
War-Time Planning of Hospitals. O. H. Bartine, New York.—p. 276.
Social Service and Dispensary Admission Service. J. Thornton, Boston. —p. 278.
High-Pressure Dressing Sterilizers or Autoclaves. S. G. Scanlan, G. L. Larson and P. F. Clarke, Madison, Wis.—p. 281.
Some Lessons War Has Taught. W. O. Ludlow, New York.—p. 283.

Nebraska State Medical Journal, Norfolk

April, 1919, **4**, No. 4

Community and Autogenous Vaccines in Treatment of Chronic Gonorrhea. M. F. Arnholt, Lincoln.—p. 98.
Surgical vs. Medical Treatment of Gastric Ulcer. H. H. Everett, Lincoln.—p. 100.
Report of Medical Work of Local Board for Division No. 1, City of Lincoln, Neb. H. P. Wekesser, Lincoln.—p. 104.
Cleft Palate and Hairlip. W. L. Shearer, Omaha.—p. 106.

New York Medical Journal, New York City

April 26, 1919, **109**, No. 17

Treatment of Two Commonest Sequels of Labor and Two Most Frequent Diseases of Women. B. C. Hirst, Philadelphia.—p. 705.
Physiotherapy in Treatment of Osteomas. P. Kouindjy, Paris.—p. 709.
Bacillus of Spanish Influenza. A. J. Kinkelmann and C. P. Hinkelmann, Oklahoma City.—p. 712.
Artificial Pneumothorax in Pulmonary Tuberculosis. I.. S. Peters, Albuquerque.—p. 714. Conclusion.
Influenza in Horses and in Man.. G. A. Soper, New York.—p. 720.
Influenza. A. B. Leeds, Chickasha, Okla.—p. 725.
Prevention and Treatment of Seasickness and Allied Conditions. N. Rosewater, Cleveland.—p. 727.
The Fleet Surgeon: Duties, Responsibilities and Status in U. S. Navy. C. A. Mayo, New York.—p. 729.

Northwest Medicine, Seattle

February, 1919, **18**, No. 2

Intraspinal Therapy in Urology and Syphilis. H. W. Howard, Portland, Ore.—p. 19.
Surgery of Prostate. G. W. Middleton, Salt Lake City.—p. 24.
Ethical Economics. G. S. Peterkin, Seattle.—p. 26.

March, 1919, **18**, No. 3

Technic of Quantitative Estimation of Urea, Ammonia and Total Nitrogen in Urine. H. D. Haskins, Portland, Ore.—p. 37.
Relation of Hospital to General Public. E. F. Tucker, Portland, Ore. —p. 42.
Some Impressions of Army Medical Service. K. Winslow, Seattle. —p. 45.
*Bacteriology of Recent Epidemic of Influenza at U. S. Naval Training Camp, Seattle, Wash. J. E. Henry.—p. 46.
Static Labyrinth. W. E. Dixon, Oklahoma City.—p. 47.

Bacteriology of Recent Epidemic of Influenza at Seattle.—Thirty-seven cases were studied by Henry. Positive findings were obtained in eight. In six these findings were pneumococcus (four, Type IV; two, Type I); in one both streptococcus and *B. influenzae* and in one, the meningococcus. Blood cultures were made in thirty-one cases. In six apparently uncomplicated cases, pneumococcus Type IV was found once. In twenty-five cases complicated by bronchopneumonia, Type IV was also found twice in the blood stream. Four spinal fluids were examined from cases diagnosed as complicated by meningitis. Pneumococcus, Type I; pneumococcus, Type IV; and meningococcus, respectively, were found in three. The fourth was sterile and the patient subsequently recovered. Of two pleural exudates, one showed both a streptococcus and *B. influenzae*, and one pneumocuccus, Type I. The latter was the only case studied at necropsy and was a bronchopneumonia. The heart's blood in this case also showed the same organism.

Texas State Journal of Medicine, Fort Worth

April, 1919, **14**, No. 12

Coat of Arms of Medical Corps. C. C. McCulloch, Jr., Washington, D. C.—p. 382.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Archives of Radiology and Electrotherapy, London

March, 1919, **23**, No. 10

*Examination of Vermiform Appendix by Roentgen Ray. E. I. Spriggs. —p. 301.
Roentgen-Ray Demonstration of Injected Vascular System of Fetus. H. C. Orrin.—p. 322.

Examination of Appendix by Roentgen Rays.—While Spriggs does not advocate making a roentgenogram in any case of acute appendicitis, he does believe that the procedure is of great value in cases of chronic appendicitis, not only in cases in which suspicion had been cast on that organ, but especially in the subjects of vague abdominal symptoms of unknown cause. In many such cases Spriggs has been able either to demonstrate a normal appendix or to show that it was, or had been, the seat of disease. He gives a barium sulphate and buttermilk meal. Of the last 100 patients examined, the appendix appeared to be normal in forty, though one of these patients showed tenderness. In nineteen cases the appendix was reported diseased; the diagnosis was confirmed by operation in eleven cases. In twenty-seven, slighter abnormalities were found, such as appendical stasis (eighteen cases), kinking, fixation, partial obliteration or diminution of lumen. In the remaining fourteen, the appendix was not seen. In one of these cases operation was done and a constriction found at the base of the appendix. An account is given of the methods and manipulations which have been found useful in the examination of 300 appendixes. Details are given of thirty-six cases in which the roentgen-ray reports are compared with the operative findings. In all of these the diagnosis was verified at the operation. Twenty-three photographs of diseased appendixes are shown, and eight colored drawings of appendixes after removal.

British Journal of Children's Diseases, London

January-March, 1919, **16**, Nos. 181-183

*Case of Aplastic Anemia. J. P. Parkinson.—p. 1.
Polyneuritis Following Treatment by Arsenobenzol. G. Variot, and M. Bouquier.—p. 4.
Recurrent Functional Micropsia. J. Thomson.—p. 7.
*Autoserum Treatment of Chorea. A. Brown, G. E. Smith, and J. G. Phillips.—p. 8.
*Treatment of Pulmonary Tuberculosis in Children by Artificial Pneumothorax. E. Stolkind.—p. 18.

Aplastic Anemia.—Parkinson's patient, a boy aged 9 years, was first seen because of bruising all over the arms, shins, and back, and a rash resembling flea bites. For a month he had been bleeding at the mouth, the lips were painful and swollen, and the gums sore. For a fortnight he had had severe headache, and was noticed to be rather pale and breathless. The red cells numbered only 1,260,000; hemoglobin 20 per cent. The cause of the profound anemia was obscure. There was no reason to suspect scurvy, hemophilia, tuberculosis or syphilis. The Wassermann reaction in the blood was definitely negative. Lead poisoning was unlikely. There was no evidence of intestinal parasites. The blood showed marked leukopenia, due almost entirely to diminution in the number of the polymorphonuclears, the lymphocytes being in relative excess, but actually about normal in number. Ophthalmoscopic examination showed slight optic neuritis and numerus hemorrhages in both retinas. The anemia subsequently increased and the hemorrhages in the gums continued. The red cells went down to 624,000; the hemoglobin was 17 per cent. Then 300 c.c. of blood mixed with 30 c.c. of citrate solution were injected intravenously. The patient's color improved greatly during and after that procedure. A second transfusion was carried out ten days later. The child grew weaker and weaker and more drowsy, and had incontinence of urine and feces. Another transfusion was refused. The boy lay unconscious for a fortnight, and then slowly improved. At the present time he seems to have recovered completely.

Autoserum Treatment of Chorea.—Twenty-three cases are reported by Brown and others in which this treatment was employed. The first step consists in withdrawing about 50 c.c. of blood from the median basilic vein. The blood is received into three sterile test tubes. The test tubes are then put in the centrifuge for thirty to forty minutes. At the end of that time the serum is drawn up in a sterile pipet, emptied into a sterile test tube, and put in the incubator to keep at the proper temperature for injection. From 50 c.c. of blood from 20 to 25 c.c. of serum are obtained. This serum is injected intraspinally, care being taken not to cause pressure symptoms. The patients are kept in the hospital for one to two hours to watch for pressure or heart symptoms. Usually improvement follows in two or three days and has become stationary again by the end of the week, when they return to the hospital and another treatment is given. Following the injection there may be a mild disturbance, such as slight rise of temperature, a slight stiffness of the neck, or increase in pulse rate. These rapidly pass off. Nothing solid is given to eat for six to eight hours following the treatment. Of the twenty-three cases observed, 77 per cent. were cured, 19 per cent. improved, and one case unimproved, this patient having refused further treatment on account of a severe reaction. There has so far been no recurrence. Of the twenty-three cases, seventeen were of a mild degree and five were severe. In four instances the duration of the disease was over a year, while the remainder showed symptoms on an average of six and a half weeks' standing. The average number of injections given was three, but several were given one injection, while in one instance five were administered before a cure was effected. The average amount of serum employed was 17 c.c. Nineteen patients were cured in three weeks and four were cured within one week. All the severe cases required more than one injection.

Treatment of Pulmonary Tuberculosis in Children by Artificial Pneumothorax.—Stolkind is of the opinion that pneumothorax treatment should be applied, not only in adults, but also in children, in every case of advanced pulmonary tuberculosis; but not as a last resort, when it is too late.

British Medical Journal, London

April 5, 1919, **2**, No. 3040

*Treatment of Bladder in Gunshot Injuries of Spinal Cord. F. Kidd.—p. 397.
*Chest Wounds. J. A. Nixon.—p. 399.
Resuscitation Work in Casualty Clearing Station. R. Charles and A. F. Sladden.—p. 402.
Colloidal Manganese in Gonorrheal Ophthalmia. D. McF. Livingstone.—p. 404.
*Methylene Blue in Purulent Discharge from Eye Socket. J. H. McIlroy.—p. 405.
*Response to Calcium shown in Maniacal States. T. C. Graves.—p. 406.
Cerebrospinal Fever. H. Rolleston.—p. 405.
Half a Century of Smallpox and Vaccination. J. C. McVail.—p. 408.
Infant Feeding. S. B. Jackson.—p. 412
Proflavine Oleate in Treatment of Open Wounds. R. A. Stoney.—p. 412.

April 12, 1919, **2**, No. 3041

New Birth of Medicine. C. Albutt.—p. 433.
War Neuroses. F. W. Mott.—p. 439.
Gunshot Wounds of Chest. T. R. Elliott.—p. 442.
Surgical Aspects of Gunshot Wounds of Chest. G. E. Gask.—p. 445.
Dysentery in England: I. Bacillary. L. S. Dudgeon.—p. 448. II. Amebic. W. Yorke.—p. 450.

Treatment of Bladder in Gunshot Injuries of Spinal Cord.—Intermittent catheterization and suprapubic cystotomy in the treatment of the paralyzed bladder after gunshot injuries of the spinal cord, Kidd says, should be discarded. In the hands of a careful worker mechanical expression of the bladder is likely to be the best method if it does not in the end diminish the chances of automatic action. This method is likely to ensure a more or less clean bladder, but it is questionable whether it will ensure an automatic bladder. Until this question is settled the method of the "tied-in" catheter is, on the whole, the best and most "fool-proof" method, and is likely to lead to the highest percentage of recoveries. After irrigating the urethra with a 33 per cent. aqueous solution of oxycyanid of mercury, the rubber catheter is passed into the bladder and is fixed with a safety pin. A piece of tape is tied to each end of the pin, is carried along the sides of the penis, and fixed there with adhesive straps. This strapping should be just tight enough to control the tapes, and yet not so tight as to cause edema of the prepuce. The tied-in catheter is left draining into a bottle all the time so that the bladder never becomes distended, a most important point. The bladder can be irrigated with oxycyanid of mercury solution (1 dram in 1 pint) twice a day. The catheter is removed every fourth day, the urethra irrigated and a fresh catheter inserted. By tying the catheter in place several objects are gained: 1. Time is not wasted by passing a catheter frequently. 2. The urethra is not damaged by the constant passing of a catheter. 3. The bladder muscle is not overstretched, so that automatic bladder can be established in a few weeks' time. 4. It is easy to carry out lavage, the urine remains clean, and pyelitis and stone are prevented.

Prompt Treatment of Chest Wounds.—Nixon emphasizes that all wounds of the parietes and thoracic contents should receive the surgical attention they require at the earliest possible moment. Hemorrhage must be arrested and every possible step taken to avert infection early. No fluid, whether blood, serum, or pus, must be allowed to collect in the chest. Early and frequent aspiration must be resorted to whether thoracotomy has been performed or not. Any fluid in the chest is dangerous from two points of view: (a) It is a nidus for sepsis. (b) It interferes with the expansion, not only of the injured, but also of the uninjured lung, setting up conditions favorable to the development and spread of bronchitis, bronchopneumonia, and lobar pneumonia. Foreign bodies, metal, clothing, and bone should be removed whenever possible. They are dangerous, not only from the point of view of immediate sepsis, but from that of subsequent interstitial fibrosis. Resection and open drainage as formerly practiced for empyema is an unsatisfactory operation, and is shown by experience in this war to be rarely necessary if the early treatment, according to modern methods, is not neglected.

Use of Methylene Blue in Infection of Orbit.—The prevailing micro-organism obtained by McIlroy by agar culture from nine cases of purulent discharge from the eye socket was found to be the *Staphylococcus aureus.* Methylene blue, although proved to be very active clinically in cases such as this one, was found to have comparatively little bactericidal action on the staphylococcus obtained from the discharge; 0.03 c.c. of a very dilute emulsion of the micro-organism, after even twenty-four hours' exposure to the drug, still yielded a number of colonies of growth after incubation.

Use of Calcium in Maniacal States.—Acting on deductions drawn from physiologic observations, Graves tested the effect of the exhibition of calcium lactate in persons suffering from various degrees of excitement. The action of the drug became evident at least during the twenty-four hours following its exhibition. The acute mental symptoms were alleviated without the production of the stupor so commonly observed following the use of "sedative" drugs. The circulatory response was equally interesting. Instead of the rapid, at times almost unaccountable pulse, with its flaccid artery and variable but always low systolic pressure, the pulse became slower, the artery normally constricted and the pulse-wave stronger, indicative of an improved action of the ventricular myocardium. The action of the drug was equally satisfactory in the distressing restlessness and excitement of agitated melancholia and confusional states as with the simple mania. Those cases in which influenza had become assigned as the principal cause have reacted well to the drug. These cases had resisted ordinary sedative treatment, but with this definite addition of calcium to the diet, a vicious circle seems to have been broken completely, and the patients made good progress toward recovery. Many of the other cases in which, owing to the duration of the character of the mental disorder, complete recovery can hardly be expected, have nevertheless shown amelioration of the more acute symptoms. Graves gives 10 grains, three times a day, with food, and when a response has been obtained drops the dosage to 5 grains. In one particularly distressing case of agitated melancholia, in addition to the doses by day, one or two doses were given at night. In one case of mania with diarrhea, not only was the restlessness and excitement allayed, but the number of stools fell from six to one. So far no untoward effects of any kind have been observed.

Edinburgh Medical Journal

April, 1919, **22**, No. 4

Disease in Macedonia. R. A. Fleming.—p. 215.
Case of Primary Chorionepithelioma of Ovary. J. A. Kynoch.—p. 226.
Congenital Edema. D. M. Greig.—p. 230.
Diets in Use in Edinburgh Royal Infirmary in 1843.—p. 234.
Doctors in Some Modern French Novels. J. B. Adams.—p. 237.
*Treatment of Sinuses Persisting After War Wounds. A. J. Turner.—p. 253.

Treatment of Sinuses Persisting After War Wounds.—The addition of a small amount of scarlet red powder Turner found was advantageous in the treatment of persistent sinuses. His paste consists of iodoform, ½ ounce; salicylic acid, ½ ounce; scarlet red powder, 25 grains; liquid petrolatum, about ½ ounce. If found a little too dry on rubbing into the tissues with dry gauze, a little additional petrolatum may be poured on the gauze so used. Turner has used this paste with good results in 110 cases. He found that it resulted in a saving of more than 44 per cent. of gauze, 18 per cent. of boric lint, 41 per cent. of plain lint, and 31 per cent. of cotton wool. There was also a saving of 49 per cent. of bandages, but this was partly due to sterilization and repeated use of all bandages, however soiled; so that none were wasted, except such as outpatients failed to bring back. One of the advantages of this antiseptic paste is the freedom from smell. Other advantages are the rapid fall of temperature in cases in which there has been fever, and the absolute comfort of the patient after one somewhat painful dressing.

Indian Medical Gazette, Calcutta

March, 1919, **54**, No. 8

Ayurveda [Hindu Medicine] of Today. W. D. Sutherland.—p. 81.
*Bacteriology of Blood and Treatment of Influenza Occurring Epidemically at Calcutta. U. N. Brahmachari and S. N. Ghosh.—p. 90.
Railway Traveling in Hot Weather. F. N. Rose.—p. 92.
Acidosis in Relation to Diabetes. B. N. Anklesaria.—p. 96.
Tetanus. A. Noronha.—p. 98.
Case of Intraperitoneal Abscess. G. K. Tambe.—p. 100.

Bacteriology of Blood and Treatment of Influenza in Calcutta.—Blood was taken by Brahmachari and Ghosh for culture in ninety cases of influenza. In ten cases the blood was taken from the heart under perfectly aseptic conditions within from half an hour to an hour after death. The cases were clinically divided under two heads: (1) mild cases in which no pneumonic symptoms were present, and (2) cases in which pneumonic symptoms were present and which were regarded as severe cases. The results of blood culture of these two types of cases was very characteristic. Thus, out of fourteen mild cases from which blood was taken for culture, only one showed the presence of streptococci in the blood, and this patient subsequently developed pneumonic symptoms and died. On the other hand, out of seventy-six severe cases, thirty-six showed the presence of streptococci or pneumococci in the blood. The blood cultures in positive cases generally showed the presence of streptococci or pneumococci. In two instances a pure culture of *Staphylococcus aureus* was obtained. Gram-negative, capsulated cocci, which formed no growth on agar or subculture, were obtained in two cases. In four cases bacilli somewhat resembling typhoid bacilli, but gram-positive, were obtained. A twenty-four hour culture of one of the strains of streptococci with hemolytic properties, obtained from the blood of one of the patients, was injected subcutaneously into one of the two guinea-pigs kept inside the same cage. The inoculated guinea-pig died after sixty hours. Smears were made of the spleen, the heart blood and the lungs. In every one of these the same kind of streptococcus was obtained as that with which the guinea-pig was inoculated. The second guinea-pig seems to have also been infected by contact (?) with the inoculated one. The second died three days after the death of the inoculated one, and the same strain of streptococcus was obtained in its organs as from those of the inoculated one.

Journal of Laryngology, Rhinology, and Otology, London

April, 1919. **34**, No. 4

Aural Bacteremia (as Apart from Pyemia). R. Lake.—p. 110.
Carcinoma of Larynx: Laryngo-Fissure; Patient Free from Recurrence After One Year. E. H. White.—p. 113.
Hemorrhage Following Removal of Tonsils, and Treatment. I. Moore.—p. 114.
Hemorrhage Following Opening of Peritonsillar Abscess. A. J. Hutchinson.—p. 122.

Journal of State Medicine, London

April, 1919, **27**, No. 4

Obviation of Ship-Borne Infections. W. M. Willoughby.—p. 97.
Conference on Prevention and Arrest of Venereal Disease in Army, at Royal Institute of Public Health.—p. 112. To be continued.
Industrial Hygiene in Relation to War Strain and Technical Development. I. W. Hall.—p. 118.

Journal of Tropical Medicine and Hygiene, London

April 1, 1919, **22**, No. 7

*Clinical and Pathologic Notes on Fatal Case of Bilharzia Treated by Tartar Emetic. R. G. Archibald and A. Innes.—p. 54.
Rigor of Malarial Fever. M. D. O'Connell.—p. 55.

Fatal Case of Bilharzia Treated by Tartar Emetic.—The tartar emetic is blamed for the death of the patient whose case is reported by Archibald and Innes. The initial dose was ½ grain, followed after a day's interval with 1 grain, and after a similar interval by 1½ grains then by 2 grains, given every second day. After the injection of the first 2 grains there was a little vomiting and a slight degree of phlebitis at the site of the inoculation, which passed off in a day without ill effects. From this time on, each injection was followed by considerable cough with frothy expectoration, which, however, regularly subsided after fifteen minutes. After the seventh and eighth injections there was a slight rise of temperature. Subsequent injections were usually followed by elevation of temperature, never higher than 99.4 F. After a total quantity of 33 grains had been given the urine was examined and proved to contain blood but no bilharzial ova.

An epidemic of influenza occurred about this period, and three days after it first appeared in the ward occupied by the patient, he acquired the disease. He had a severe cough with respiratory embarrassment, a temperature of 105 F., and a pulse of 120. Although his temperature remained persistently high for the next two days, he did not appear to be losing ground. Suddenly, on the fourth day of the illness, he developed signs of collapse with sighing respiration and air hunger. The pulse became feeble and rapid, and, in spite of the usual heart stimulants, he died within an hour of the onset of the collapse. The findings obtained at necropsy convinced the authors that the pathologic changes in the organs were due to the action of tartar emetic, and were not sequels of bilharzia, influenza or a previous malarial infection.

Lancet, London

April 12, 1919, 2, No. 4989

Cerebrospinal Fever: Lumleian Lectures. H. Rolleston.—p. 593.
Sanitary and Insanitary Makeshifts in Eastern War Areas. A. Balfour.—p. 604.
*Treatment of General Paralysis of Insane by Introduction of Arsphenaminized Serum into Lateral Ventricle. H. Campbell and C. Ballance.—p. 608.
*Malaria and Trench Fever. G. Ward.—p. 609.

Treatment of General Paralysis of Insane.—Attention is directed by Campbell and Ballance to their first report (1914) on the treatment of general paralysis of the insane by the introduction of arsphenaminized serum into the lateral ventricle. They now suggest the same treatment for the arrest of optic atrophy. The optic nerve has a sheath derived from the dura mater, another derived from the arachnoid and another from the pia. The space underneath each of these sheaths can be injected separately. The injection beneath the arachnoid sheath passes into the substance of the optic nerve, and if made into the subpial space passes into the optic nerve and extends as far as the papilla, and this, it is suggested, should be the path which the curative serum should take so as to save the essential elements of the papilla and retina from destruction. Whether the injection should be made into the lateral ventricle or through the outer angle of the sphenoidal fissure into the subarachnoid space at the base of the brain remains to be determined.

Malaria and Trench Fever.—Ward believes that the close resemblance between malaria and trench fever does not seem to be generally appreciated. Rigor is usual in malaria, provided the patient is not taking quinin. It occurs, but is unusual, in trench fever. Quinin controls the temperature in malaria in most cases, i. e., it prevents more than one or two further rises to 103 or 104 F. This, of course, applies to temperate climate malaria. Quinin has no effect in trench fever. A rash is absent in malaria, but may be seen in trench fever. Leg pains are more frequent in trench fever, but may be of equal intensity in malaria. Some cases of malaria show a general pigmentation (often well seen in the lips), which increases with attacks and diminishes between them. This is not seen in trench fever. Finally, trench fever and malaria may be contracted *de novo* in England and the fact that a patient has suffered from one of them will not necessarily enable him to distinguish between a relapse of that one and the onset of the other.

Sei-I-Kwai Medical Journal, Tokyo

March 20, 1919, 37, No. 2-3

Three Cases of Nephroma Embryonale. J. Saito.—p. 7.
*Oriental Constricted Liver (Schnur-Leber). F. Oshima.—p. 10.

Oriental Constricted Liver.—Oshima investigated sixteen cases of the so-called Oriental constricted liver (Schnurleber), and found that the course of the sulcus coincides with that of the vessel in the diaphragm. He is of the opinion that the fixation of the liver by the ligamentum suspensorium hepatis and the pressure of the Japanese woman's belt make the longitudinal sulcus of the liver immovable, and, moreover, the liver is pressed by the diaphragm from above and, because of the manner in which the Japanese sit, from below. As the liver tissue begins to show the effects of advanced age, there is a natural tendency to folding in the superior surface of the liver, corresponding to the sulcus sagittalis in the inferior surface. In addition to the above facts, if the congestion and pulsation of the vessels of the diaphragm exists, the surface of the liver should be pressed and molded by the vessel, such influences being the important factor in the occurrence of the sulcus (Oriental constricted liver). Therefore, the vessel of the diaphragm plays an important rôle in the development of this sulcus.

Journal de Radiologie, Paris

March, 1919, 3, No. 4

*Roentgen Technic for Certain Points in the Skeleton. Laquerrière and Pierquin.—p. 145.
Radiographic Aspects of Osteophytic Spondylosis. A. Leri and V. Mahar.—p. 149.
Apparatus for Radium Therapy. A. Laborde.—p. 153. Cont'n.
The Maximum of Mobilization in Locating Projectiles. H. Costantini and L. Gosselin.—p. 164.
The Conference of War Radiologists. Mignon and others.—p. 165.

Special Technic for Roentgen Study of Certain Bones.—The tip of the shoulder, the knee, the space between the condyles, the head of the fibula and the heel may require a special technic for each to be most instructive, as is described in detail. The subject kneels on the floor for the radiogram to be taken of the popliteal space.

Paris Médical

March 15, 1919, 9, No. 11

Fatty Degeneration of the Liver from Physiologic and Pathologic Standpoints. Gilbert and Surmont.—p. 213.
*Treatment of Malaria. G. Paisseau and J. Hutinel.—p. 216.
*Septicemia in Influenza. Cayrel.—p. 221.

Treatment of Malaria.—Paisseau and Hutinel present arguments from their own experience to prove that the combination of arsphenamin with quinin is much more effectual than the latter alone in treating malaria. They gave an intramuscular injection of 1.20 gm. of quinin at the beginning or during the malarial attack, followed within twenty-four hours—preferably from six to twelve—with an intravenous injection of 0.15 gm. arsphenamin. This is repeated every week, with mild tertian, increasing the dose of the arsphenamin to 0.30 gm. With malignant tertian, they give two injections of the quinin daily until the temperature is normal. Then 0.15 gm. arsphenamin is injected, and after this 2 gm. of quinin by the mouth until the temperature has been normal for two days. The two drugs are then kept up once a week for two months and, during a third month, once a fortnight. Iron and epinephrin are useful adjuvants.

Septicemia in Influenza.—Cayrel cites from various writers their conflicting views on this subject. The variability of the microbian flora and the date when the cultures are made from the blood seem to offer the only explanation of the divergent findings.

March 22, 1919, 9, No. 12

*Reconstruction of the Face. L. Dufourmentel.—p. 229.
Aseptic Meningeal Reactions with Brain Wounds. R. J. Weissenbach, W. Mestrezat and H. Bouttier.—p. 232.
*The Wassermann Reaction in Chronic Splenomegaly. P. E.-Weil.—p. 237.
Partial Resection of Sacrum in Treatment of Total Prolapse of Rectum. A. Bréchot.—p. 239.

Reconstruction of the Face.—A number of technical points are emphasized and some cases are illustrated.

The Wassermann Reaction with Splenomegaly.—Weil obtained a positive Wassermann reaction in seven of nine cases of primary chronic splenomegaly. There was nothing to indicate inherited or acquired syphilis, and treatment as for syphilis did not modify the reaction or the splenomegaly, but only seemed to aggravate the general condition.

Presse Médicale, Paris

March 13, 1919, 27, No. 15

*Aseptic Operations on Digestive Tract. Gudin (Rio de Janeiro).—p. 133.
War Neurasthenia. M. Page and E. Gauckler.—p. 134.
*Radium Emanations for Treatment of Cancer. F. Jeunet.—p. 136.

Aseptic Operations on Stomach and Intestine.—Gudin gives sixteen illustrations of a crusher clamp with thumb screw for gastro-intestinal operations which, he says, absolutely prevents escape of the contents, coaptates the mucosa, and does not crush the tissues enough to impair their vitality.

Needles Coated with Radium Emanations in Treatment of Cancer.—Jeunet is convinced that applying radium emanations on needles is the method *par excellence* for radium treatment of cancer. As many needles can be used as desired, and the practitioner can thus have it in his power to undertake a serious offensive against the malignant disease, with the minimum of discomfort for the patient, while the emanations are carried into the depths of the tumor, just where they are most needed. The needles lose their potency in about four days, but they can be recharged. This requires merely an accessible industrial source for production of the emanations. He remarks that the works of Danne, in particular, have aided in rendering this feasible. The needles are much like ordinary sewing needles, the surface is covered with the emanation like a coating of mist. As the emanation is easily wiped off, it is coated outside with collodion or celluloid. The emanation content of each needle is tested with the gold-leaf electroscope. With these needles the practitioner, he says, can induce the complete retrogression of certain neoplasms, render others operable, ward off or abort recurrence, abolish pain, deodorize, and otherwise "cure morally" the inoperable and incurable cancers. Jeunet does not give further specific directions or mention any concrete experiences.

March 20, 1919, **27**, No. 16

*Uremia with Retention of Urine. F. Legueu.—p. 141.
*Traumatic Headache. R. Benon.—p. 142.
*Chronic Nephritis and the Previous Condition. M. Nathan.—p. 143.

Uremia with Retention of Urine.—Legueu refers to the uremia with prostatic or other retention of urine, readily curable by evacuation of the urine. Ambard's coefficient has little or no significance in these cases, as the kidneys may be intact. Catheterization several times a day will cause the prompt subsidence of azotemia from this cause. The thirst, the digestive disturbance, the polyuria, the susceptibility to infection, are explained by the distention of the bladder, but they may occur even with incomplete retention, and the uremia may increase to a fatal termination unless the poisoning from the incompletely voided bladder is recognized in time. The diet and drugs are far less important than systematic voiding of the urine. Otherwise the pressure on the ureter mouths causes disturbance which may reach to the kidneys and modify their secretory functioning. With azotemia of less than 1 gm., the Ambard constant may prove instructive; with over 1 gm. the degree of uremia is the main feature of the case. This must be supervised and brought down to 1 gm. before any operation, even cystostomy, is attempted for the prostatic lesion responsible for the retention. With uremia up to 2 gm., any operation of the kind would be inevitably fatal, even under local anesthesia, while the subsidence of the uremia under regular voiding of the bladder prepares the patient for the operation on the prostate.

Traumatic Cephalalgia.—Benon describes the primary, immediate and essential post-traumatic cephalalgia which is sometimes encountered after war wounds or aerial shock. It calls for tranquil surroundings and out of door life. Lumbar puncture does not benefit and may even aggravate the condition.

Chronic Nephritis.—Nathan cites some instances to illustrate the way in which Bright's disease searches out and aggravates the preexisting weak points in the body. *Chacun fait son brightisme avec son passé et son hérédité.* The localization of the symptoms at first depends essentially on the preexisting state; apparently extinct lesions are liable to flare up under its influence and mask the causal kidney disease. Treatment should be directed to the kidneys to attenuate the superposed nephritic phenomena. This is the only way to study these complex cases which form the daily bread of pathology. By treatment on this basis, the masked "brightism" can perhaps be kept under control, with long survival and a fairly active life.

Revue Mens. de Gynécologie, d'Obst. et de Péd., Paris

February, 1919, **14**, No. 2

*Cesarean Section Versus Instrumental Dilation. Carlini.—p. 49.
Fibromyxoma of Round Ligament. C. Walther.—p. 60.

Instrumental Dilation.—Carlini writes from Bossi's clinic to extol the benefits of instrumental dilation in appropriate cases, describing twelve cases. He criticizes some recent reports on vaginal cesarean section, declaring that the cases in which it was applied would have fared better with instrumental dilation. Any practitioner can apply the latter, he reiterates.

Deutsche medizinische Wochenschrift, Berlin

Jan. 9, 1919, **45**, No. 2

Study of Causes and Conditioning Factors. (Ursachenforschung, Ursachenbegriff und Bedingungslehre.) O. Lubarsch.—p. 33. Commenced in No. 1, p. 1.
*Nitrogen or Air in Artificial Pneumothorax. K. Henius.—p. 36.
*Latent Infection. A. Loeser.—p. 37.
*Pseudomembranes in Air Passages with Influenza. S. Meyer.—p. 38.
Influenza and Pulmonary Tuberculosis. Rickmann.—p. 39.
*Poliomyelitis in German Army. A. Stern.—p. 40.
*Intraspinal Anesthesia. H. Frank.—p. 41.
Treatment of Gonorrhea in the Female. Weinberg.—p. 42.
*Butter Gruel in Infant Feeding. K. Ochsenius.—p. 42.
*Poisoning from Treatment of Varicose Veins. F. Hammer.—p. 45.

Absorption of Air and of Nitrogen with Artificial Pneumothorax.—Henius reports research on a dog injected in turn with air and with nitrogen to induce pneumothorax. The tabulated findings show that air is not absorbed any more rapidly than nitrogen, and hence that air can successfully compete with nitrogen for production of artificial pneumothorax in man.

Latent Infection.—Loeser expatiates on the lessons learned during the war in regard to the danger from latent infection. Aside from the gonococcus, latent infection in the genital tract of women may be of dire importance for the course of the puerperium. The saprophytes acquire virulence under the traumatic conditions of parturition. The constitution and the latent infection anywhere in the body form a vicious circle when the vitality gets depressed from any cause. The metabolic products from latent infection may also possibly be a factor in arteriosclerotic processes and in the growing old of the tissues.

Pseudomembranous Obstruction of Air Passages in Influenza.—Meyer has encountered fifteen cases of this kind; the age ranged from 1 to 40 years. All these patients had fever up to 40.4 C. (106 F.). Notwithstanding the diphtheria-like symptoms, there was no deposit to be seen in the throat or tonsils, but in six of the eight fatal cases the larynx, trachea and bronchi were scattered with patches of pseudomembranes firmly attached to the mucosa. The seven patients who recovered expectorated for a long time a thick, fibrin-rich yellow sputum. Diphtheria antitoxin was given in every case, as it was impossible to exclude diphtheria positively, and he ascribes the recovery mainly to this although it had no specific action. An emergency tracheotomy was done in six cases, but the progressive pseudomembrane production continued unchecked or the heart gave out. Intubation proved successful in two children.

Poliomyelitis in the Army.—Stern reports that five soldiers with poliomyelitis reached his hospital on the eastern front, all within a short period, and all from the Ukraine front. The paralysis retrogressed more or less completely in each case, although in one there was evidently superposed hysteria. Nothing was known of an epidemic among children, and there was nothing to indicate syphilis in any case, but in two instances, attention had been called to the great mortality among poultry at the time.

Spinal Analgesia.—Frank emphasizes that the anesthetic should be allowed to flow into the spinal cavity almost spontaneously. The term "injection" is in itself misleading, although the syringe has to be used. The whole should be done extremely slowly and gently, the patient breathing deep

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t **Feeding.**—Ochsenius extols the fine
gruel made with 7 gm. butter; 7 gm.
ugar in 100 gm. of the vehicle. The butter
and stirred with a wooden spoon until it foams and
the odor of fat acid disappears, which occurs in from three to five minutes. Then the fine wheat flour is added and blended with the melted butter and cooked on an asbestos plate until the whole is thin and brownish (about four or five minutes). Then the warm water and sugar are added, and the whole boiled up and forced through a hair sieve; then the boiled and cooled milk added. The proportions between the butter and the flour must always be the same, but the other ingredients can be modified. This is the Czerny-Kleinschmidt *Buttermehlsuppe* and the experiences published with it to date have been very satisfactory. This has been confirmed by Ochsenius' experience in seventy-six cases in the course of the last half year, including his own infant. The rule is to give not more than 80 gm. at a feeding. He was impressed with the transformation of the nervous, restless, crying children into a phase of quiet, smiling content, on this food. He never witnessed such a rapid change under other methods of feeding. It proved particularly useful for infants with incipient or established intolerance for cow's milk; some gained up to 300 gm. a week.

Mercurial Poisoning from Local Treatment of Varicose Veins.—Hammer injected 1 c.c. of a 1 per cent. solution of mercuric chlorid, fractioned, in the much enlarged, ulcerated vein on the leg. The patient was a robust woman of 36 who had two living children out of five pregnancies. Vomiting and diarrhea followed in an hour and a half, with anuria, edema, and fatal collapse the twelfth day. The injections were made strictly according to Linser's technic. The products of putrefaction in the ulcer probably cooperated in the violent reaction. The drug was injected hoping to induce immediate coagulation in the vein, to obstruct it, but this evidently did not occur.

Schweizer Archiv f. Neurol. und Psychiatrie, Zurich

1918, 3, No. 1

*Paralysis from Centripetal Contraction. M. Egger.—p. 1. In French.
Malformations of the Cerebellum. R. Brun.—p. 13.
*Varieties of the Babinski Reflex in Diagnosis. R. Bing.—p. 89.
The Ganglia of the Forebrain. E. Landau.—p. 95.
Different Categories of Mental Tests. E. Claparède.—p. 102. In French.
Weakness and Small Size of Left Leg After Early Trauma of Brain. D. Pachantoni.—p. 119. In French.
Hysteria in Prisoners of War Interned in Switzerland. A. Repond.—p. 128. In French.
Are the Alcoholic Degenerates? H. Preisig and K. Amadian.—p. 147. In French.
*The Biochemistry of the Brain. G. Pighini.—p. 177. In Italian.

The Mechanism of Hemiplegia.—Eggers presents what he calls a new conception of hemiplegia. He declares that the classic conception of the rôle of the pyramidal tracts does not harmonize with what is observed in hemiplegia. The subject in time regains the use of his leg for walking and the movements connected therewith, while the volitional movements persist as defective still as they are in the arm. The five examples of hemiplegia under prolonged control, which he describes, apparently demonstrate that the degeneration of the pyramidal tract paralyzes *only* centripetal contraction and leaves centrifugal contraction practically intact. In other words, it paralyzes only the apparatus for volitional movement.

Varieties of the Babinski Reflex.—Bing's study of the Babinski reflex in the purely cerebral and the purely spinal cases of spastic paralysis, with their transitional forms, is based on 246 cases. Among other points to which he calls attention is the absence of the Babinski reflex in cases of amyotrophic lateral sclerosis; it was absent in all of his six cases in this category. In six cases of *état lacunaire* of the brain, the Babinski was positive in five, but the reflexogenous zone was restricted to the sole.

The Biochemistry of the Brain.—The articles in the *Archiv* are all in German except when otherwise specified. Pighini's research on this subject is merely summarized here from a course of five graduate lectures recently held at Turin.

Annali d'Igiene, Rome

January, 1919, 29, No. 1

Development of Cholera Peritonitis in Guinea-Pigs. G. Sanarelli.—p. 1.
Bactericidal Properties of Garlic, Lemon Juice, etc. C. Sarti.—p. 4.
Prevalence of Influenza Bacillus in Epidemic at Rome. M. Carpano.—p. 15.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 2, 1919, 40, No. 18

*Shoulder Presentations in Different Countries. A. Ippolito.—p. 137.

March 9, 1919, 40, No. 20

Symptomatology with Projectile in Chest. G. Pisanò.—p. 155.

Frequency of Shoulder Presentation in Different Countries. Ippolito cites statistics from six different countries which show that the proportion of shoulder presentation ranges from 0.35 per cent. (America) and 0.36 (England) to 0.58 (Germany) and 0.66 (France) to 0.71 (Austria). Italy, on the other hand, has an average of 1.40 per cent. shoulder presentations, according to the figures of Pasquali and Corradi, but Ippolito in 10,000 deliveries in twenty years of practice in Sicily has encountered shoulder presentation only in 0.12 per cent. He theorizes to explain this great difference, saying that a tendency to shoulder presentation seems to be an ethnic-anthropologic phenomenon. Comparing the average height of the different races shows that shoulder presentation becomes less frequent the taller the women; least in Anglo-Saxons, it is most frequent in the Slavic races of Austria. At the same time, the distance between the lower margin of the xiphoid appendix and the upper margin of the pubic symphysis seems to be remarkably constant in women, irrespective of their height, Nature striving to maintain an ample vertical diameter in the abdominal ovoid. Sicilian women are short, but the shortness is in the legs; the length of the trunk and the distance between the xiphoid appendix and the pubis are rather above the average than below. He insists, therefore, that the xiphopubic measurement is one of the most important obstetric measurements for oversight of conditions in pregnancy and delivery. He ascribes to the clothing, the absence of corsets and of factory work, the physiologic development of the genital sphere in the women of Sicily.

Policlinico, Rome

March 23, 1919, 26, No. 12

*Albumin in the Sputum. F. Durand.—p. 353.
*Ascariosis. A. Rotolo.—p. 363; R. Bellantoni.—p. 364.
Quinin in Prophylaxis of Influenza. Alessandro.—p. 364.

March, 1919, 26, Surgical Section No. 3

*Projectile in the Heart. I. Scalone.—p. 81. Conc'n.
*Ether and Chloroform and the Leukocyte Count. C. Oliva.—p. 96.
Secondary Hemorrhage with Gas Gangrene. P. Amorosi.—p. 108.

Albumin in the Sputum.—Durand examined the sputum for albumin in 120 cases of pulmonary tuberculosis and in large numbers of cases of pneumonia, simple catarrh, etc. The findings corroborate the assumption that albumin in the sputum has no diagnostic significance, but that it is important for the prognosis. The quantitative variations in the albumin content are proportional to the activity, the extent and the depth of the pulmonary lesion.

Ascariosis.—Rotolo reports that a previously healthy woman of 26 developed a condition diagnosed as influenza just before delivery of her first child. The puerperium was apparently normal but the thirteenth day came a dull pain in the right hypochondrium, and the eighteenth day a chill and fever, subsiding by the next day. That same evening a violent prolonged chill and fever to 104 F. were accompanied by intense exaggeration of the continuous pain in the right hypochondrium. By exclusion and the history that an ascaris had been passed a few days before, Rotolo was inclined to incriminate helminths, and under santonin a tangled wad of six long ascarides was passed, with three others later, and all local and general disturbances ceased at once and permanently.

Projectile in Heart.—The preceding instalment of Scalone's article was mentioned in these columns, April 26, p. 1620. His conclusions from extensive study of the immediate and remote effects of war wounds of the heart are to the effect that a projectile loose in the heart cavity should always be removed on account of the danger of its being swept along. When the projectile is embedded in the myocardium, its removal will not undo the injury already inflicted on the myocardium, and may materially aggravate it. If it is not causing grave disturbance of the intrinsic innervation of the heart, he thinks it is wiser to leave it untouched. In every case the advantages and drawbacks of an operation should be carefully balanced before deciding; the question is not one of technic but of physiopathology.

The Leukocytes with Chloroform and Ether.—Oliva's experiments on rabbits confirmed the general assumption that ether does not induce leukocytosis, like chloroform, and does not seem to display a toxic action on the liver and other tissues.

Riforma Medica, Naples

March 8, 1919, **35**, No. 10

No Benefit from Phenol by the Vein in Influenza. G. Pieraccini.—p. 185.
Influenza at Mantua. A. Visentini and G. Bono.—p. 186.
Diagnosis of Active Pulmonary Tuberculosis. G. Sofrè.—p. 191.
The Proposed Minister of Health. A. Botti.—p. 199.

Rivista Critica di Clinica Medica, Florence

Feb. 8, 1919, **20**, No. 6

Eosinophilia with Helminthiasis. A. Martiri.—p. 61. Cont'n.

Feb. 22, 1919, **20**, No. 8

Diagnosis of Influenza and Catarrh. C. Minerbi.—p. 85.
*Objective Sign of Cardiac Neurosis. C. Minerbi.—p. 87.

Objective Sign of Neurosis of the Heart.—Minerbi has the subject lie supine and he then lifts the legs nearly vertical. As he lets go of the legs, he tells the subject to lower them himself, very slowly and gradually, not to let them fall loose. The outline of the heart has been previously determined and it is determined anew at once after this maneuver. In physiologic conditions, the upper outline of the heart will be found at least 2 or 3 cm. below what it was before. There is evidently a symmetrical retraction of the auricles, but the rest of the outline is found unmodified. In cases of a neurosis of the heart, however, the outline will be found incredibly shrunken all around—a universal retraction toward the center of the heart.

Archivos Brasileiros de Medicina, Rio de Janeiro

December, 1918, **8**, No. 12

*Hemostatic Serum. F. Magalhães.—p. 735.
Mongoloid Idiocy. E. Meirelles.—p. 738.
Hemiplegias. F. Esposel.—p. 750.

Hemostatic Serum.—Magalhães discusses the use in obstetrics of the hemostatic serum made at the Instituto de Butantan by O. Veiga. It is merely the coagulating elements isolated from normal horse serum, by diluting to one half and treating with a saturated solution of ammonium sulphate. In a threatening case of internal hemorrhage from tubal abortion, Magalhães injected by the vein 5 c.c. of this hemostatic serum, while efforts were made to reanimate the woman. In half an hour the condition was entirely satisfactory; the blood evidently clotted soon. In another case, cesarean section required for placenta praevia had been preceded by intravenous injection of 5 c.c. of this hemostatic, and he was impressed with the advantages from it.

Archivos do Inst. Bact. Camara Pestana, Lisbon

1918, **5**, No. 1. French Edition

*Experimental Syphilis in the Rabbit. F. Pulido Valente.—p. 1.
*Prevalence of Helminths in Lisbon Children. I. Paes.—p. 17.
*Etiology and Pathology of Paretic Dementia. F. P. Valente.—p. 29.
*Prophylactic Treatment of Rabies. M. Athias and P. Da Silva.—p. 89.
Early Infection of Subarachnoid Space in Syphilis. F. Pulido Valente and J. P. P. Miguens.—p. 101.
*The Pirquet Skin Tuberculin Reacti[illegible]
*Diphtheria at Lisbon. N. Bettencourt.—p. 111.

Experimental Syphilis in the Rabbit.—Pulido Valente remarks that his findings did not accord altogether with those that have been reported by others, as he explains in detail. See second abstract below.

Helminths in Lisbon Children.—Paes states that no systematic investigation of intestinal worms has ever before been made in Portugal in either children or adults. She had the stools of 503 children examined, and helminths were found in 54.1 per cent. The helminths represented were trichocephalus (44.7 per cent.); ascaris (18.1 per cent.); dwarf tapeworm (6.5 per cent.); and the oxyuris in 2.2 per cent. In some of the children there was more than one species. The largest proportion with helminthiasis were between 2 and 4 years old. After 9, the proportion rapidly declined.

Pathogenesis of General Paralysis.—Pulido Valente's three articles are accompanied by six fine colored plates and extensive bibliography. His research has confirmed the early penetration of the pale spirochetes into the meninges. He has found them in the cerebrospinal fluid as early as the second month after infection. The pale spirochete that induces paralysis seems to have become modified and to have acquired especially injurious properties in respect to nerve tissue. The difference in aggressivity for the nerve tissue displayed by different generations of the same strain of spirochetes was strikingly demonstrated in his experimental research. An interesting problem is to determine whether the pale spirochete inducing paretic dementia has become resistant to our therapeutic measures. Ehrlich was inclined to accept this as the cause of the failure of specific treatment in paretic dementia.

Rabies at Lisbon.—In 1913 and 1914, 3,477 persons were given antirabic treatment at the institute; nine persons died during treatment or in less than two weeks afterward, and two died later. The number treated has constantly increased but the mortality has dropped from 1.75 per cent. in 1895 to zero in five recent years; it was 0.06 and 0.10 in the two years in question. Cats, cattle, asses, monkeys and wolves had been incriminated as well as 1,634 dogs and forty-two human bites. One child of 7 developed rabies nine months after the antirabic treatment.

Skin Tuberculin Reaction.—Lopes concludes from application of the Pirquet test to 312 children and 218 adults that it may be regarded as almost infallible for young children. The reliability decreases in inverse proportion to the age. In the much debilitated, the absence of the reaction always proves an unfavorable sign.

Brazil-Medico, Rio de Janeiro

Feb. 8, 1919, **33**, No. 6

*Leprosy at Rio de Janeiro. F. Terra.—p. 41. Conc'n.
Influenza at Rio. R. Da Silva.—p. 44.

Leprosy at Rio.—Reviewed on page 1335, May 3.

Medicina Ibera, Madrid

Feb. 1, 1919, **6**, No. 65

Nephritis. S. Pascual.—p. 101. Cont'n.
*Doses for Children. J. A. Sierra.—p. 105.
Fracture of Surgical Neck of Humerus. Corrales.—p. 106.

Feb. 8, 1919, **6**, No. 66

Mercury Cyanid by the Vein in Severe Syphilis. J. Algora.—p. 128.
Horny Papilloma of the Prepuce. Sicilia.—p. 132.

Doses for Children.—Sierra comments on the absurdity of any formula to be applied to all children, indiscriminately, by age alone. He advises fractioning the dose and increasing it until the desired result is attained, watching out closely for individual intolerance which may compel the complete suspension of the drug. For infants under a year old, he begins with the fifth of the adult dose, fractioning it through twenty-four hours. From 1 to 4 years old, the fourth of the adult dose; from 3 to 6, a third, and from 6 to 15, a half.

Plus Ultra, Madrid

November, 1918, **1**, No. 5

*The Mechanism of Skiascopy. II. M. Márquez.—p. 239.
*Recent Progress in Ophthalmology T. Barraquer.—p. 248.
*Diagnosis of Incipient Pulmonary Tuberculosis. R. Hyvert.—p. 249.

Recent Progress in Bacteriology. L. Lamas.—p. 258.
Case of Abdominal Contusion. F. Pagés.—p. 263.
Recent Progress in Hydrology. H. R. Pinilla.—p. 267.
*Danger of Apparent Death During Times of Epidemic Disease. Lecha-Marzo.—p. 270.
Recent Progress in Urology. I. S. Covisa.—p. 272.
Recent Progress in Heart Disease. A. Mut.—p. 276.
*Roentgen Treatment of Epithelioma of the Penis. J. and S. Ratera.—p. 282.
Recent Progress in Therapeutics and Pharmacology. S. Banús.—p. 284.
Case of Disease of the Protuberance. C. Juarros.—p. 287.
Graphic Record of Mental State in Dementias. G. Bosch and A. Mó.—p. 289.
Data for Interpreting the Analysis of the Gastric Juice. F. F. Martinez.—p. 293.

Skiascopy.—In this second article on the mechanism of skiascopy, Márquez presents experimental data to sustain his assumptions, with six additional charts.

Diagnosis of Incipient Tuberculosis.—Hyvert's article is accompanied with five fine roentgen plates, nearly 11 by 15 inches in size, besides a number of smaller illustrations, and he emphasizes the instructive points in each for the diagnosis of incipient tuberculosis.

Danger of Apparent Death During Epidemics.—Lecha-Marzo's research on means to distinguish between real and apparent death has been described in these columns at different times, as on page 1010, Sept. 29, 1918. He here reiterates that in countless healthy persons and in 1079 persons of both sexes and in many hundreds of cases of diseases of the eye (which he lists separately) the reaction of the tears during life was invariably alkaline. Tested after death, by slipping a scrap of litmus paper under the eyelid, the reaction equally invariably veered to acid. The change was sometimes evident in half an hour, and only exceptionally took up to several hours.

Roentgen Treatment of Epithelioma of the Penis.—Ratera applied 28 roentgen units, June 18, 1915, and 21 units, June 19, treating the lesion afterward with a zinc oxid salve. By October the cancer had entirely disappeared, and there has been no return during the three and a half years to date.

Repertorio de Medicina y Cirugia, Bogotá

February, 1919, **10**, No. 5

*Drugs Contraindicated in Pregnancy. G. Muñoz.—p. 227.
Renal Tuberculosis. M. Mendez S.—p. 241.
Glaucoma. C. M. Pava.—p. 245.

Drugs Contraindicated in Pregnancy.—Muñoz asserts that he views with horror the administration of potassium iodid to pregnant women, as he has seen it induce abortion, kill the fetus in the later months, and even sacrifice the nursling, when the drug had been used for local application to the breast. He reports a case of each of these contingencies. Iodin seems to act like a stimulant; it exaggerates the menstrual flow and may induce actual hemorrhage. Both iodin and potassium iodid have been extolled by Russian physicians as effectual in typhus. Muñoz' experience confirms the benefit from potassium iodid in treatment of inveterate amenorrhea in robust women; also by hypodermic injection in treatment of the neuralgias of diabetics, instead of morphin. He warns further that morphin should not be given when there is nephritis with albuminuria.

Revista de la Asoc. Medica Argentina, Buenos Aires

December, 1918, **29**, No. 169

Memoirs of a Hygienist. E. R. Coni.—p. 709. Cont'n.
Tracheobronchial Glandular Disease in Children. J. P. Garrahan and O. S. Dastugue.—p. 758. Conc'n.
Action of Epinephrin on Muscular Fatigue of Frogs and Toads. J. Guglielmetti.—p. 774.
*Treatment of Obesity. L. O. Romero.—p. 796.
Record of Oscillometer Pulse Findings. F. L. Soler.—p. 813.

Treatment of Obesity.—Romero remarks that charlatans' advertisements, promising "to reduce the weight by 30 pounds" if their medicines are taken, have educated the public to believe that it is a simple and prompt matter to cure obesity. The physician has to start from the foundation and instruct and train the patient to be the guardian of his own health. In order to reestablish the functional balance, indispensable for the cure, extremely minute and detailed examinations and supervision of the metabolism, etc., are necessary. Romero's experience has taught him that the obstacles for success do not come from the patient himself so much as from the prejudices of those around. He outlines a ten months' course of treatment. The first month he devotes to resting the digestive and muscular apparatus, beginning with two days allowing only water, and two purges with a twenty-four hour interval. A mixed diet is then allowed, with green vegetables, cooked without condiments, and in small amounts. No drinking with meals. Thorough mastication is enforced, and Romero takes some of the first meals with the patient to train in careful mastication. All fatigue is avoided, even walking to the office. Every day the patient is weighed, always at the same hour, after stool, fasting and unclothed. The general health improves and up to 10 pounds may be lost the first month.

Psychotherapy is important to counteract the prejudices and fears of friends, and to educate the weak will of the obese. The second month, slow gradual myotherapy is begun, with gymnastic exercises under the physician's supervision. By the third month the benefit has been so pronounced, usually, that the patient is full of enthusiasm, but still the muscular exercise must be promoted with skill and tact; persuasion and energy are necessary. If the physician fails to make the muscular exercise a pleasure and have it done with conviction, the course of treatment will fail. Careful breathing exercises are important likewise, and air baths and sun baths can be begun as also organotherapy, at this time, if it is indicated. In the fourth month he suppresses meat and applies massage to the main deposits of fat, with hot or cold douches, a cold shower after a rapid walk or sun bath. The fifth month he tries the effect of suppression of salt for a time, giving nothing but fruits and whole bread for a few days. In the three following months all this treatment by the natural agents, myotherapy and elimination of waste, is kept up, and meat is allowed on certain days to make up for the muscular play, but very little salt and not much butter are permitted. During the last two months the effect on the weight of different articles of food is studied, and the patient is impressed anew that the final outcome depends on the functional balance, which is under the control of his strong will power that has been gradually developed. Romero insists that obesity in the young and in the aged should be combated on the same plan. In other affections, the patient is usually a passive element in the treatment, but in treatment of obesity the patient must work out his own salvation, and the physician's task is to get him to do this. Mental indecision is one of the most prominent features of the syndrome of obesity. Romero gives no details of special cases.

Revista Clinica, Medellín

March, 1918, **2**, No. 8

Quinin Prophylaxis on Colombia Railroad. E. Henao.—p. 342.
The Pathogenic Rôle of the Trichocephalus. W. Montoyo.—p. 353.

Revista de Med. y Cirugia Practicas, Madrid

Feb. 21, 1919, **122**, No. 1543

*Furuncle on Lower Lip. E. A. Sainz de Aja.—p. 193.
Tin in Treatment of Mammitis. E. Chome and A. Frouin.—p. 195.

Furuncle on Lower Lip.—In de Aja's two recent cases, household remedies had been long applied before he saw the patients, and the furuncle had perforated inward into the mouth, causing a most distressing condition. The cases teach the importance of antistaphylococcus vaccine early in a case of furuncle on the lower lip as this class of lesions seem to be exceptionally acute and virulent.

Semana Medica, Buenos Aires

Feb. 20, 1919, **26**, No. 8

Another Case of Granulomatosis. C. B. Udaondo and J E. Carulla.—p. 181.
Poisonous Anise. Palet.—p. 185. See Buenos Aires Letter, p. 1309.
*Tuberculosis of Seminal Tract. A. Sacco.—p. 188.
Sublingual Lipoma. R. Becco.—p. 195.
Public Hospital System in Bolivia. N. M. Villazón.—p. 197.
Jalap in Therapeutics. S. Velazquez de Castro.—p. 198.

Tuberculosis of Seminal Tract.—Sacco reports that he had 33 per cent. of failures in his cases of genital tuberculosis in men treated by simple castration. On the other hand, 100 per cent. permanent cures were realized by systematic orchivasovesiculectomy as he describes in detail. His analysis of the literature on tuberculosis of the seminal tract shows that widely diverging views are held by different surgeons. None of them have reported 100 per cent. cured as he realized in those of his eight cases of genital tuberculosis treated by this "ideal castration."

Siglo Medico, Madrid

Feb. 1, 1919, **66**, No. 3399

Autointoxication. D. J. M. Rosell.—p. 85. Conc'n.

Feb. 15, 1919, **66**, No. 3401

*F. Balmis and His Work. J. M. A. Sanz.—p. 125.
*Thyroid-Heart Disease. A. Del Cañizo.—p. 130. Commenced in No. 3399.—p. 81.
Infectious Jaundice. M. Vila.—p. 132.

Balmis and His Work.—This year is the centennial of the death of this early missionary of vaccination, sent out by Spain to vaccinate the New World.

Cardiothyroid Disease.—Del Cañizo discusses the severe functional disturbance in the heart action liable to be entailed by excessive thyroid functioning with or without actual exophthalmic goiter. All the goiter-heart cases fall into two groups (1) those with extremely toxic hyperthyroidism entailing severe functional derangement of the heart action, and (2) those with chronic goiter but the symptoms of toxic action from the thyroid are mild, and yet the heart is organically impaired. He cites examples of each of these two types and remarks that the difference between them is mainly that of time. Acutely fatal exophthalmic goiter, as in a case he describes in a previously healthy young woman after a severe emotional shock, represents the extreme of Type 1. In time, however, they all settle down into the chronic form of Type 2.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

Feb. 8, 1919, **1**, No. 6

*Fermentation in Urine with Pyelitis. J. T. Peters.—p. 441.
*Index of Nutritional Condition of Schoolchildren. C. J. van der Loo.—p. 447.
Is there Underfeeding Among Amsterdam Schoolchildren? C. F. T. v. Ziegenweidt.—p. 454.
Index of Nutritional Condition of Antwerp Schoolchildren in Recent Years. M. C. Schuyten.—p. 457.
Rupture of the Fundus of the Uterus. P. G. Rinsema.—p. 458.

Fermentation in the Urine with Pyelitis.—Peters was able to find on record only four cases like the one he recently encountered himself in which the urine was thick and ropy and showed signs of fermentation. His patient was a pregnant young woman with pyelitis and intermittent fever. This phenomenon of jellification and fermentation of the urine seems to be the work of a special variety of colon bacilli, the *Bacterium coli mobile capsulatum.* It has been called the *Bacterium glischrogenum* by others. In the total five cases it was found in pure culture in the urine. The pyelitis in his case was evidently a pregnancy pyelitis; it subsided after the normal delivery, and the urine returned to normal after the bladder had been disinfected.

Index of Nutritional Condition of Schoolchildren.—Van der Loo remarks that as children grow taller they increase more proportionately in weight than in length, so that the weight divided by the square of the length of the body gives a fairly good index for comparison of conditions in different children or in the same child at different times.

Hospitalstidende, Copenhagen

Feb. 26, 1919, **62**, No. 9

*Congenital Defective Osteogenesis. A. Johannessen and T. Eiken.—p. 257. Conc'n.

Defective Osteogenesis—Johannessen and Eiken here describe research on congenital imperfect osteogenesis, and on its connection with genuine osteomalacia, adding considerable bibliography. They had occasion to study a typical case from the first day after birth to the necropsy at thirteen months. The anomaly seems to be due to inability to utilize calcium, rather than to a lack of calcium.

March 5, 1919, **62**, No. 10

*Fermentation Dyspepsia. T. Stenström.—p. 305.
General Review of Narcotic Action of Magnesium Salts. H. C. Gram.—p. 313. Conc'n.

Intestinal Fermentation Dyspepsia.—The condition in Stenström's case developed soon after a gastro-enterostomy, and proved persistent until ameliorated by dietetic measures under which the man gained 15 kg. in about five months.

Ugeskrift for Læger, Copenhagen

March 13, 1919, **81**, No. 11

*Syphilis and Neurorecurrence in Auditory Nerve and Labyrinth. C. Jacobsen.—p. 471.
*Fermentation Dyspepsia in Children. C. Thorsen.—p. 481.

Neurorecurrence of Syphilis in the Auditory Nerve or Labyrinth.—Jacobsen analyzes four cases in which sudden deafness, subjective noises in the ear, or vertigo with vomiting were the warning that the syphilis had invaded the organ of hearing or that the drugs used had induced a toxic action. Analysis of these and similar cases on record seems to show that part of the neurorecurrences are due to a Herxheimer reaction to arsphenamin. This reaction congestion in a nerve confined in a narrow passage through bone injures the nerve and may cause permanent trouble. But the majority of cases of disturbances in the auditory nerve are the result of actual damage from the syphilis, combined with or possibly secondary to a syphilitic meningitis. There may possibly be also a small contingent of cases in which the nerve is suffering from a direct toxic action from the arsphenamin. Even in persons with normal ears, special care should be exercised in giving arsphenamin; during the exanthem stage or a little before this, it is wiser to give the arsphenamin only in combination with mercury. With actual syphilis and neurorecurrence in the auditóry nerve, arsphenamin must be pushed but it is indispensable to give mercury with it if the trouble is recent. Lund's experience with nine cases of neurorecurrence in the auditory nerve confirms anew the absolute necessity, he declares, for giving mercury for a time before beginning with the arsphenamin. In three of his cases, with infection dating from six to twelve weeks before, there had been some slight signs of vestibular neuritis. Under the associated arsphenamin and mercury treatment this became very much worse, to complete vestibular paralysis in one case. There had been very little, if any, mercury given before this. A preliminary course of mercury might have warded off injury.

Intestinal Fermentation Dyspepsia.—Thorsen remarks that while intestinal fermentation dyspepsia in infants is now a well recognized and manageable clinical picture, in older children it often is misinterpreted. Examination of the watery and frequent stools will reveal the carbohydrate dyspepsia, and the cure under treatment on this basis will confirm the diagnosis. The small intestine is incapable of digesting carbohydrates properly. The products of the fermentation irritate the mucosa of the bowel. Modifying the diet corrects conditions but this has to be long kept up, and relapses are frequent, although final restoration of normal conditions is the rule. He gives no directions as to treatment, but describes the clinical picture. A boy of 12 or 13 may have to go to stool four or five times during school in the morning, or the stools may follow the meals, the child being scarcely able to wait for the close of the meal. The child is not disturbed during the night, but the sleep is generally restless, and several thin passages and much flatus are the rule in the morning. There is also a tendency to tympanism but the appetite keeps good and the child usually seems well nourished, but inclined to lassitude to such an extent that older children find it difficult to keep up with with their class in school. Younger children are cross and cry readily, and at all ages the children find it difficult to hold their urine long, and they may occasionally wet the bed. The mother of one such child knew always by the child's lassitude and irritability when an attack of diarrhea was impending.

THE VICTORY MEETING

ATLANTIC CITY SESSION

AMERICAN MEDICAL ASSOCIATION, SEVENTIETH ANNUAL SESSION, ATLANTIC CITY, JUNE 9-13, 1919

OFFICIAL CALL

TO THE OFFICERS, FELLOWS AND MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION

The seventieth annual session of the American Medical Association will be held in Atlantic City, N. J., June 9-13, 1919.

The House of Delegates will convene at 10 a. m., Monday, June 9. In the House the representation of the various constituent associations for 1919 is as follows:

Alabama	3	New Hampshire	1
Arizona	1	New Jersey	3
Arkansas	2	New Mexico	1
California	3	New York	11
Colorado	2	North Carolina	2
Connecticut	2	North Dakota	1
Delaware	1	Ohio	6
District of Columbia	1	Oklahoma	2
Florida	1	Oregon	1
Georgia	2	Pennsylvania	9
Idaho	1	Rhode Island	1
Illinois	8	South Carolina	1
Indiana	3	South Dakota	1
Iowa	3	Tennessee	2
Kansas	3	Texas	5
Kentucky	3	Utah	1
Louisiana	2	Vermont	1
Maine	1	Virginia	3
Maryland	2	Washington	2
Massachusetts	5	West Virginia	2
Michigan	4	Wisconsin	3
Minnesota	2	Wyoming	1
Mississippi	1	Canal Zone	1
Missouri	5	Hawaii	1
Montana	1	Philippine Islands	1
Nebraska	2	Porto Rico	1
Nevada	1		

The fifteen scientific sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health Service are entitled to one delegate each.

The general meeting, which constitutes the opening exercises of the Scientific Assembly of the Association, will be held at 8:30 p. m., Tuesday, June 10. The various sections of the Scientic Assembly will meet Wednesday, June 11. at 9 a. m. and at 2 p. m., and subsequently, according to their respective programs.

The Registration Department will be open from 8:30 a. m. until 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 9, 10, 11 and 12, and from 8:30 a. m. to 12 noon, on Friday, June 13.

Arthur Dean Bevan, President.
Hubert Work, Speaker, House of Delegates.
Alexander R. Craig, Secretary.

MEMBERS OF THE HOUSE OF DELEGATES

A Preliminary Roster of the Legislative Body of the American Medical Association

The list of members of the House of Delegates for the session is incomplete, as a number of the state associations are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover delegates and of the newly elected members who have reported to The Journal in time to be included:

STATE DELEGATES

ALABAMA

S. W. Welch, Montgomery.
S. G. Gay, Selma.

ARIZONA

R. G. Stroud, Gleason.

ARKANSAS

C. P. Meriwether, Little Rock.

CALIFORNIA

George H. Kress, Los Angeles.
V. G. Vecki, San Francisco.

CANAL ZONE

COLORADO

L. H. McKinnie, Colorado Springs
J. N. Hall, Denver.

CONNECTICUT

J. E. Lane, New Haven.

DELAWARE

P. W. Tomlinson, Wilmington.

DISTRICT OF COLUMBIA

G. Wythe Cook, Washington.

FLORIDA

John S. Helms, Tampa.

GEORGIA

S. R. Roberts, Atlanta.
H. H. Martin, Savannah.

HAWAII

A. N. Sinclair, Honolulu.

IDAHO

ILLINOIS

R. J. Coultas, Mattoon.
T. D. Doan, Scottville.
E. B. Coolley, Danville.
C. E. Humiston, Chicago.
L. Hektoen, Chicago.
C. W. Leigh, Chicago.

INDIANA

Charles Stoltz, South Bend.
A. E. Bulson, Jr., Fort Wayne.
Joseph R. Eastman, Indianapolis.

IOWA

John C. Rockafellow, Des Moines.
M. N. Voldeng, Woodward.

ISTHMIAN CANAL ZONE

R. U. Runyan, Panama.

KANSAS

Charles S. Huffman, Topeka.

KENTUCKY

Carl L. Wheeler, Lexington.
W. W. Richmond, Clinton.

LOUISIANA

MAINE

MARYLAND

Randolph Winslow, Baltimore.
Thomas S. Cullen, Baltimore.

MASSACHUSETTS

J. B. Blake, Boston.
H. G. Stetson, Greenfield.
L. F. Woodward, Worcester.
F. B. Lund, Boston.
E. F. Cody, New Bedford.

MICHIGAN

A. W. Hornbogen, Marquette.
F. C. Warnshuis, Grand Rapids.
Guy Connor, Detroit.
J. G. Brook, Grandville.

MINNESOTA

George D. Head, Minneapolis.
W. H. Magie, Duluth.

MISSISSIPPI

Willis Walley, Jackson.

MISSOURI

W. J. Ferguson, Sedalia.
A R. McComas, Sturgeon.
Franklin E. Murphy, Kansas City.

MONTANA

Rudolph Horsky, Helena.

NEBRASKA

Joseph M. Aikin, Omaha.

NEVADA

William Z. Dahl, Reno.

NEW HAMPSHIRE

Robert J. Graves, Concord.

NEW JERSEY

Luther M. Halsey, Williamstown.
Edward Guion, Atlantic City.
George H. McFadden, Paterson.

NEW MEXICO

H. A. Miller, Clovis.

NEW YORK

James W. Fleming, Brooklyn.
Dwight H. Murray, Syracuse.
Frederic E. Sondern, New York.
George W. Kosmak, New York.
Arthur J. Bedell, Albany.

NORTH CAROLINA

H. A. Royster, Raleigh.
C. P. Ambler, Asheville.

NORTH DAKOTA

Charles MacLachlan, New Rockford.

OHIO

OKLAHOMA

LeRoy Long, Oklahoma City.
Charles R. Hume, Anadarko.

OREGON

PENNSYLVANIA

W. F. Bacon, York.
G. R. S. Corson, Pottsville.
H. B. Gibby, Wilkes-Barre.
George G. Harman, Huntingdon
Wilmer Krusen, Philadelphia.
Edward B. Heckel, Pittsburgh.
John D. McLean, Philadelphia.
David N. Dennis, Erie.
John M. Baldy, Philadelphia.

PHILIPPINE ISLANDS

PORTO RICO

Jorge del Toro, Santurce.

RHODE ISLAND

F. T. Rogers, Providence.

SOUTH CAROLINA

Edgar A. Hines, Seneca.

SOUTH DAKOTA

TENNESSEE

E. T. Newell, Chattanooga.

TEXAS

I. C. Chase, Fort Worth.
M. L. Graves, Galveston.

UTAH

Joseph R. Morrell, Ogden.

VERMONT

F. T. Ridder, Woodstock.

VIRGINIA

W. E. Anderson, Farmville.
Southgate Leigh, Norfolk.

WASHINGTON

H. H. McCarthey, Spokane.
D. E. McGillivray, Pt. Angeles.

WEST VIRGINIA

Frank LeMoyne Hupp, Wheeling
Chester R. Ogden, Clarksburg.

WISCONSIN

C. H. Lemon, Milwaukee.
Horace M. Brown, Milwaukee.
Rock Sleyster, Wauwatosa.

WYOMING

DELEGATES FROM THE SECTIONS

PRACTICE OF MEDICINE
George D. Head, Minneapolis.

SURGERY, GENERAL AND ABDOMINAL
Jabez N. Jackson, Kansas City.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY
F. F. Simpson, Pittsburgh.

OPHTHALMOLOGY
Walter B. Lancaster, Boston.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY
George F. Keiper, Lafayette, Ind.

DISEASES OF CHILDREN
Isaac A. Abt, Chicago.

PHARMACOLOGY AND THERAPEUTICS
A. D. Hirschfelder, Minneapolis.

PATHOLOGY AND PHYSIOLOGY
E. R. Le Count, Chicago.

STOMATOLOGY
William C. Fisher, New York

NERVOUS AND MENTAL DISEASES
Hugh T. Patrick, Chicago.

DERMATOLOGY
George MacKee, New York.

PREVENTIVE MEDICINE AND PUBLIC HEALTH
W. S. Rankin, Raleigh.

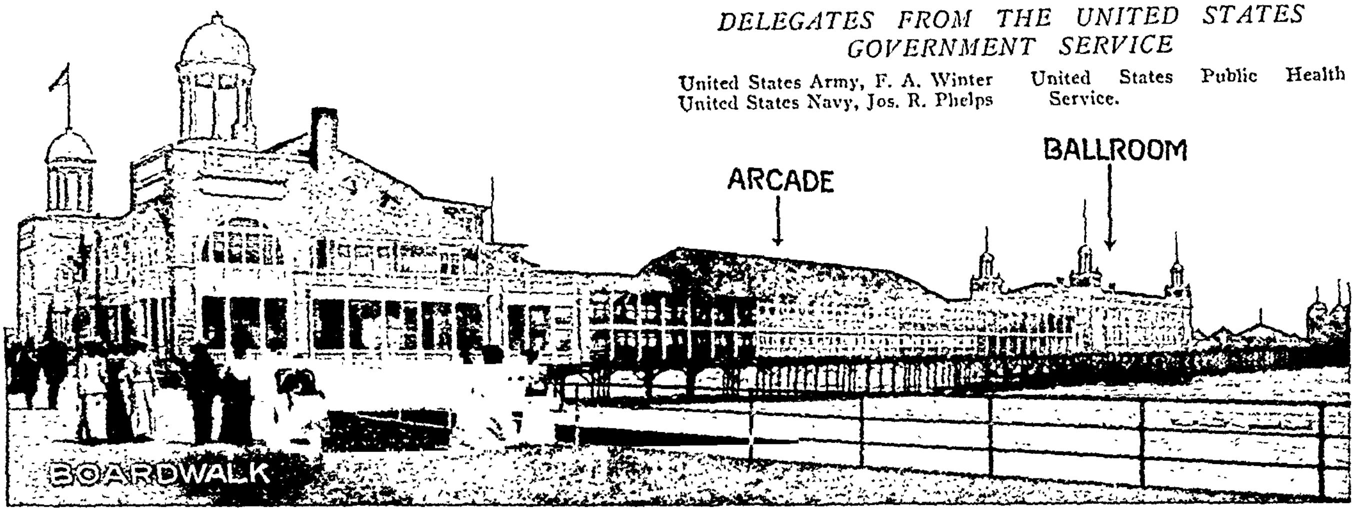
GENITO-URINARY DISEASES
Granville MacGowan, Los Angeles.

ORTHOPEDIC SURGERY
John Ridlon, Chicago.

GASTRO-ENTEROLOGY AND PROCTOLOGY
William VanValzah Hayes, New York City.

DELEGATES FROM THE UNITED STATES GOVERNMENT SERVICE

United States Army, F. A. Winter
United States Navy, Jos. R. Phelps
United States Public Health Service.



The Steel Pier—Opening Meeting, Registration and Exhibits.

ATLANTIC CITY· THE SUNRISE CITY OF AMERICA

Atlantic City, the world's best known health and pleasure resort, is built on an island of virgin sand 10 miles long and from one-fourth to 1 mile in width, over 5 miles from the shore line of New Jersey, with intervening tide water bays, thoroughfares and salt meadows. Owing to the peculiar contour of the New Jersey coast, Absecon Island faces almost directly south, which gives continuous sunshine to the entire beach front and Boardwalk from sunrise to sunset. About 90 miles at sea the Gulf Stream tempers the surrounding waters and heats the cold wintry winds that cross its ever moving path. Surrounded by water that, in winter, is many degrees warmer than the cold blasts of the north; in summer, with a temperature below the warm winds of the interior; and aided by her southerly exposure, Atlantic City's has a climate that is 10 to 15 degrees cooler than the nearby inland cities in summer and with the same variation of warmth in winter.

MOSQUITOES EXTERMINATED

The salt meadows in the rear have been so thoroughly drained and ditched by the Mosquito Commission of New Jersey that stagnant pools are entirely unknown and the proverbial New Jersey mosquito is practically a thing of the past for Atlantic City. The Anopheles has never been seen in Atlantic City, hence malaria is unknown and never existed here.

THE SUNSHINE RESORT

The average annual sunshine in Atlantic City is reported by the United States Weather Bureau at 61 per cent. as contrasted to 50 per cent. in many other places. With a freedom from factory smoke and dust our sunshine is perfectly bright and clear and gives an actinic action greatly in excess of the heavily ladened air of the interior where the particles of dust and soot absorb and reflect the violet and ultraviolet spectral rays. On this fact alone depends our greatest therapeutic climatic effects. For this reason sunburn is more common at the shore. Ocean air is particularly pure; it invigorates and gives new energy to the tired, anemic, and exhausted, to the convalescent and pleasure seekers who come seeking health, rest, appetite and sleep. Sunshine, pure air, health and pleasure are Atlantic City's commodities in trade—none others need apply.

THE BOARDWALK

Atlantic City's boardwalk is so well known to the world that it needs little comment. This unique structure extends 8 miles along the ocean front, 20 to 60 feet wide with its pine planks laid on massive concrete pillars, 8 to 10 feet above the strand. The smooth rolling chair paths and the new "herring bone" relaid decking remove the disagreeable features of the old boardwalk and make walking and roller chair riding a real pleasure. Except for six pleasure and recreation piers the ocean view from the boardwalk is unobstructed. A stroll along this structure is equivalent to a walk on the deck of an ocean liner with all of its invigorating salt breezes and stimulus, but lacking in the disagreeable rolling and tossing of the vessel. The city's side of the boardwalk is lined with metropolitan hotels, stores, amusements, theaters, movies and bathing establishments. Every nation of the globe is represented by the boardwalk merchants who are glad to show and sell Oriental, domestic and imported wares and articles of art and trade. This continued wall of buildings protects the boardwalk from the north winds of winter and the hot land breezes of summer. The boardwalk is beautifully lighted and on an evening stroll or roller chair ride under the scintillating rays of myriads of electric lights almost transform one to the realms of fairyland. Add to this the bewitching beauties of a full moon, shedding its rays on the bosom of the smooth Atlantic, and one forgets the trials and troubles of business cares and lapses into a soliloquy of sentimentalisms. Once having enjoyed this scene there is a constant longing to repeat and repeat.

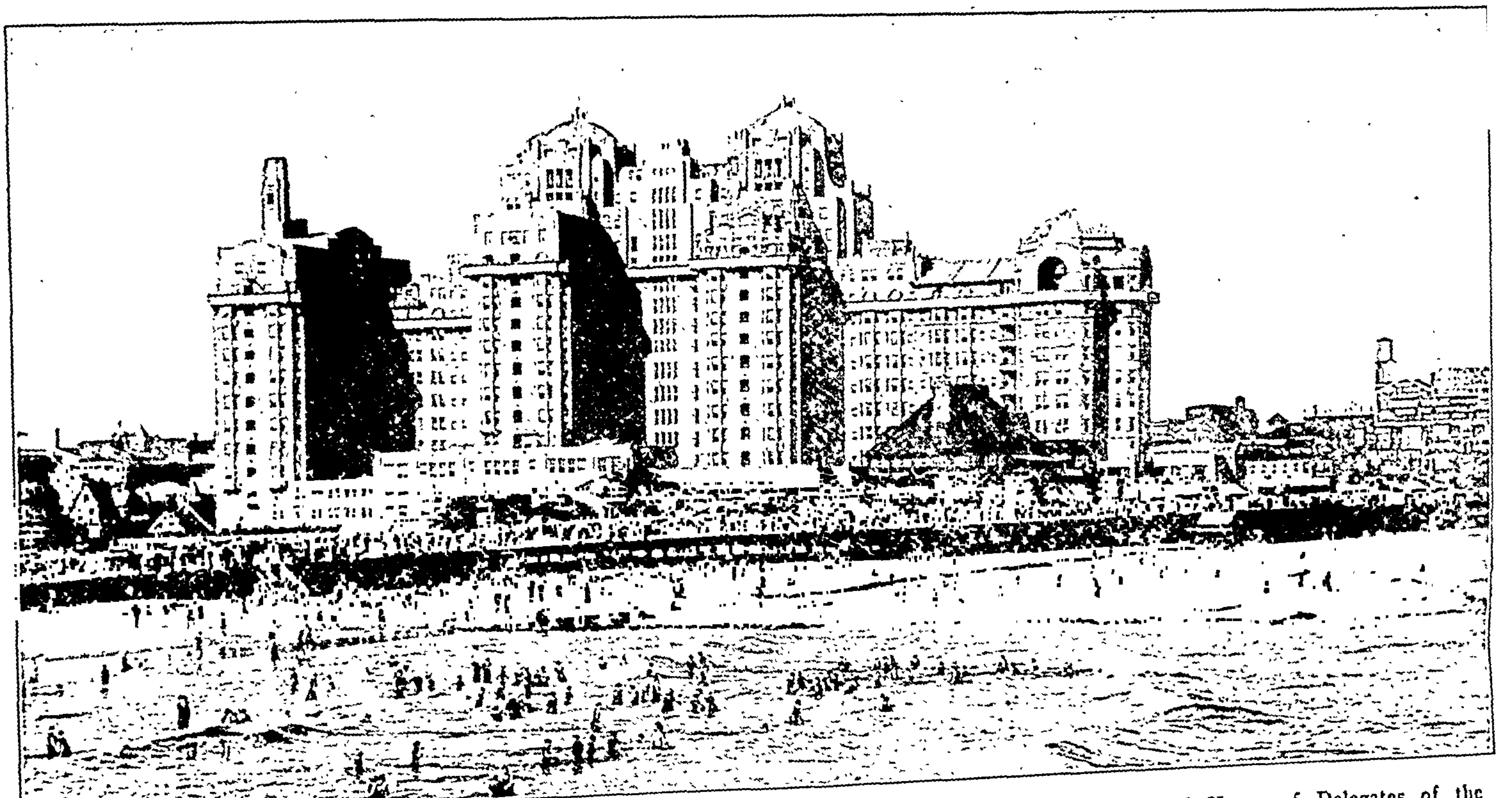
The rolling chair has become a fixture and is used as a vehicle of pleasure by the strong and well, and a comfort and convenience by the sick and convalescent. The boardwalk is patrolled day and night by a courteous, thoroughly trained police force that is constantly alert for the comfort and safety of visitors. When the crowds are largest and the ever moving kaledioscopic mass of people passes to and fro, disorder is unknown, for the atmosphere of happiness, good cheer and comradeship prevails and conventionalities are forgotten. "As safe at midnight as at noon" is the sentiment here. Twenty-four rest pavilions are provided on the ocean side where one can enjoy an easy chair and view the ocean or boardwalk.

THE HOTELS

Atlantic City has a class of hotels that is unexcelled in the world as to structure, service, comfort and cuisine. Three new million dollar structures are now being planned for the boardwalk, while others will follow in the near future. There are about twelve hundred hotels and boardinghouses that accommodate the transient thousands at prices within the reach of all. These hotels conform to the rules of an up-to-date Hotel Men's Association that provides fair treatment and honest dealing for every visitor.

BATHING

The bathing beach is one of the safest and best in the world and runs with a gradual slope to deep water. Life lines are unnecessary. The bathing beach is patrolled during bathing hours by life guards with police power who have at their command life boats and other necessary appliances. Four hospital emergency tents fully equipped and manned by competent registered surgeons and nurses are ready for the treatment of bathing accidents and minor injuries. Drownings are practically unknown in the patrolled areas. There are over thirty bathing establishments, many of which are equipped with tiled floors, showers and treatment rooms.



View of Atlantic City's famous boardwalk and the beach showing the Traymore Hotel, meeting place of House of Delegates of the American Medical Association for this session.

RECREATION

The finest theatrical productions are shown in Atlantic City. There are excellent provisions for boating, fishing and golf. Nowhere do opportunities for recreation exist that surpass those of America's chief vacation city.

THE CITY WATER SUPPLY

The municipal water supply comes from thirty-two artesian wells and cedar streams on the mainland 8 or 10 miles from Atlantic City. The artesian wells are driven through a deep bed of sand, gravel and an impervious clay bed where they tap an absolutly pure and uncontaminated water supply. These wells supply 6,000,000 gallons of water daily—enough for Atlantic City's use in her dullest times. The surface supply comes from streams that flow through virgin cedar forests and a watershed that is owned and controlled by Atlantic City and on which there are no habitations. This water is pure, safe and free from all contamination and is carried into a storage basin of nearly 300 acres area and from which water is carried as an auxiliary supply to the artesian water as the seasons' demands increase or special emergency requires. Monthly analyses covering a period of two years show a complete absence of bacteria and a sterile water from the surface sources. As a positive preventive against possible accidental contamination of the surface supply, three-tenths of one part per million of chlorin is used, even though unnecessary. The artesian and surface supplies are free from odors and taste and can be used at all times in unlimited quantities without stomach or intestinal disturbances or danger of disease. The large hotels have their own artesian wells driven to a depth of 850 feet from which an absolutely pure sparkling potable water is obtained. The general water supply of the city and hotels is free from lime salts and is a soft water. Analyses show only two grains of dissolved solids per U. S. gallon. With conditions of this kind it is positively unnecessary for visitors to buy bottled waters for table use.

Atlantic City's sewage is carried by a gravity system to central pumping plants where it is screened, chlorinated and pumped seven miles back of the city where it is properly disposed in thoroughfare waters.

RESIDENTIAL SECTIONS

A trip to Atlantic City is not complete without a visit to the shopping and residential sections. With 50 miles of well paved asphalt, bituminous, wood block and brick streets no cleaner or better drained city can be found. The main surface drainage is cared for by a large drainage conduit running the full length of the city to tidewater at both ends. Over 60,000 people make Atlantic City their permanent home, for they have found this the healthiest climate in the world. There are thirteen public schools; five national banks and six trust companies; thirty-five churches of every religious denomination; a white and colored Y. M. C. A.; up-to-date Atlantic City Hospital and a new Municipal Hospital for contagious diseases; a modern fire department with 180 paid firemen who have at command the most modern motorized equipment; a high pressure main in the boardwalk and hotel district; two yacht clubs with more than 400 yachts and power boats; an up-to-date chamber of commerce and publicity bureau for promoting the city's welfare.

A CHANCE TO FLY

Atlantic City now presents the first aeroplane schedule to New York, Philadelphia and other cities. By it one can fly to Philadelphia in 25 minutes and to New York in 50 minutes and at rates not in excess of taxi rates for the same trips. Aviation trips are permanent features of Atlantic City's pastimes. Aeroplanes are seen at all hours of the day making trips to and fro along the beach front and over the city. The entire month of May, 1919, will be given over to an international aviation meet the like of which has never been seen in America. The new aviation field under the municipal control of Atlantic City is one of the largest in the country where safe landings can be made on the land or adjoining water of the bay or thoroughfare. Where time, pleasure or adventure are factors, the Atlantic City aeroplane routes will soon become very popular.

Excellent automobile roads lead from Philadelphia, New York, and other points to Atlantic City. Some of these are in process of rebuilding by the state of New Jersey and when finished no better concrete roads will be known. The United States government has dredged the inlet channel to a depth of 12 feet at low tide and Atlantic City is providing modern docking facilities for yachts and pleasure craft.

On your first visit you like Atlantic City, but when you come a second time you find it irresistible and have that contagious longing for the boardwalk, the beach, the sea baths, the swimming pools, the golf courses, and the stimulating, appetizing, soporific fresh air and sunshine. Atlantic City is now as popular in winter as in summer. It is an all year resort. All of the beach front hotels are open both winter and summer. With hotel facilities the very best; with a unique boardwalk and rest pavilions and climatic conditions unexcelled, is it any wonder that the world plays in Atlantic City and that her citizens have justly adopted the *slogan:* "ATLANTIC CITY ALL THE TIME."

REGISTRATION

The Importance of Registering Early—A Few Suggestions Which Will Facilitate Registration

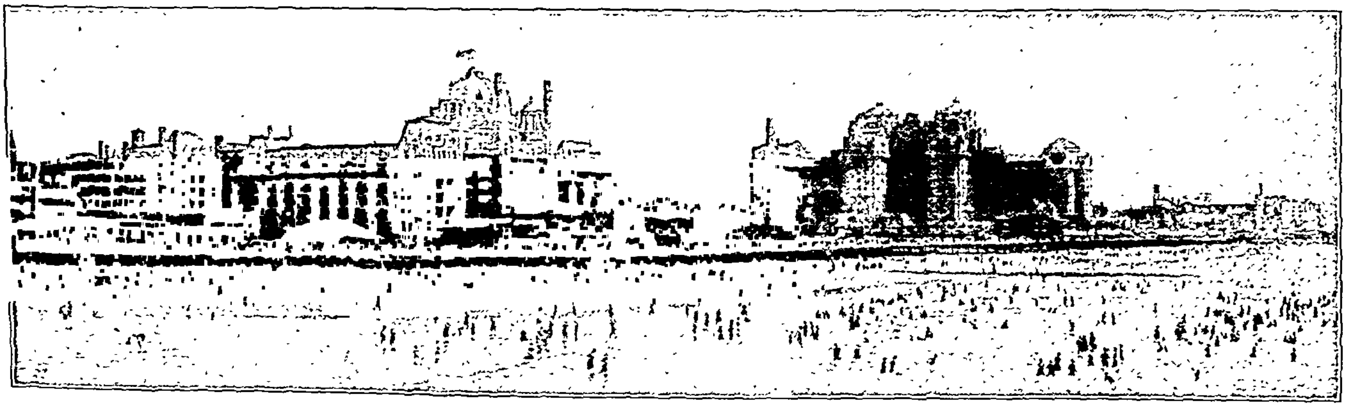
The Bureau of Registration will be located in the Ball Room of the Steel Pier. A committee of local physicians will assist those desiring to register. A branch postoffice will be opened, and a bureau of information established in connection with the Registration Bureau. Here the conventionist may secure copies of the *Daily Bulletin* which announces the names of visitors and other important convention material.

Every one who registers will be required to fill out completely the spaces on both parts of the double registration cards, which will be found on the tables in front of the Registration Bureau. These entries should be written very plainly, or printed, as the cards are given to the printer to use as "copy" for the *Daily Bulletin.*

1. Fellows who have their pocket cards with them can be registered with little or no delay. They should present the filled out registration card, together with their pocket card, at one of the windows marked "Registration by Pocket Card." There the clerk will compare the two cards, stamp the pocket card and return it, and supply the Fellow with a copy of the official program and other printed matter of interest to those attending the annual session.

2. Those Fellows who have forgotten their pocket cards should present the filled in registration card at the window marked "Paid—No Card." The work of registration at this window will be conducted as rapidly as possible; but the necessity of finding the Fellow's name on the Fellowship roster may occupy a considerable time and will occasion inconvenience to those who neglect to bring their pocket cards with them.

3. The Fellow whose 1919 dues are unpaid should present his filled in registration card with the amount of his Fellowship dues ($5) at one of the windows marked "Cash." Here, too, there will be occasioned some delay; but the work of registering will be conducted as promptly as possible.



The panorama along the boardwalk. On the extreme left, the Shelburne Hotel; in the left foreground, the Hotel Dennis; left center, the Marlborough-Blenheim; at the right center, the Traymore Hotel and the Brighton Casino.

4. It will assist in registering if those who desire to qualify as Fellows will file their applications and qualify as Fellows by writing directly to the American Medical Association, 535 North Dearborn Street, Chicago, so that their Fellowship may be entered not later than June 1. Any applications received later than June 1 will be given prompt attention, but the Fellowship certificate and pocket card may not reach the applicant in time so that he can use this card in registering at the Atlantic City Session, and he may be required to make a second payment of his Fellowship dues, which must be held until the records at headquarters can sulted after the close of the session, when any will be adjusted.

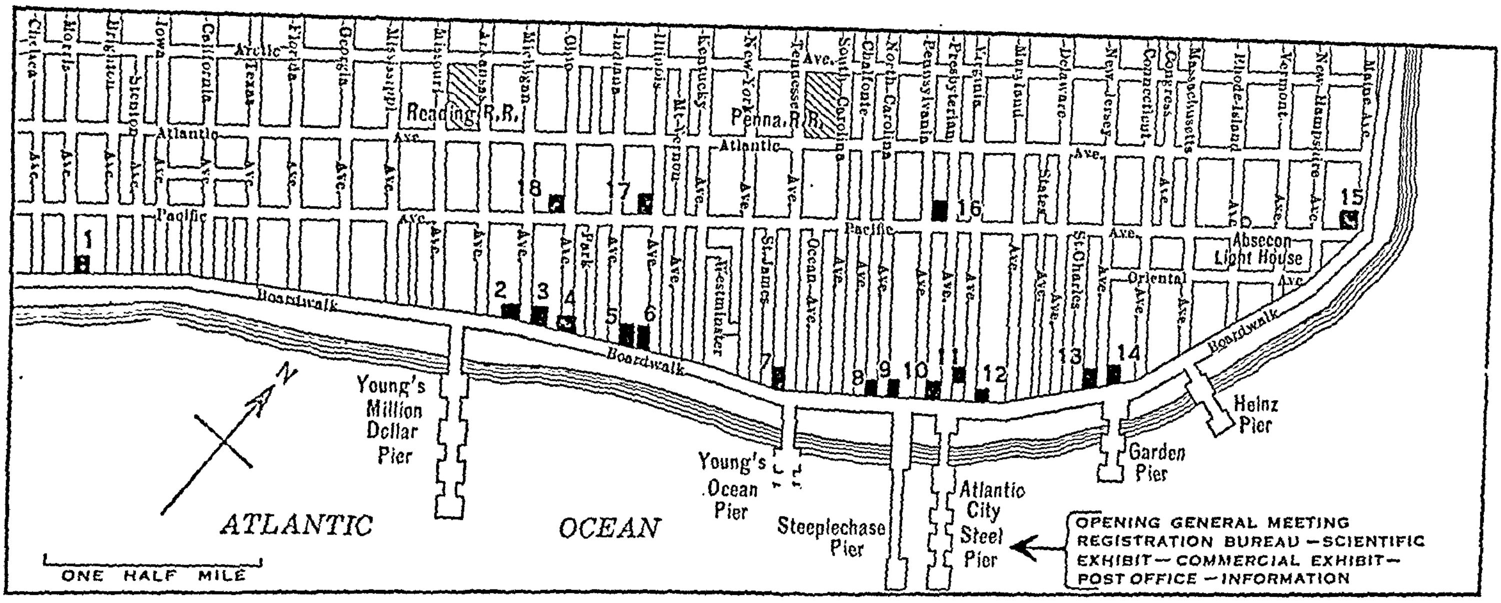
If, however, a member of the Association neglects to qualify as a Fellow before reaching Atlantic City he may be entered as a Fellow at the meeting by following procedure. He should present a filled in registration card, together with a formal application for Fellowship at the window marked "New Fellows." These applications for Fellowship can be obtained at Window No. 1 of the Registration Bureau or from the members of the Committee on Registration. In order to qualify as a Fellow, the applicant must be officially reported as a member of the constituent association of the state in which he resides, and in addition to filing this formal application, he must pay his annual Fellowship dues for the current year; if already a subscriber to The Journal, with his subscription paid for a term to or beyond Jan. 1, 1920, no additional payment is necessary. If subscription is not paid in full for the current year, the payment of a sum to extend it to Jan. 1, 1920, is required.

The registration of new Fellows will be greatly facilitated if, before leaving their homes for Atlantic City, they will provide themselves with certificates of membership issued by the secretary of their state association, certifying to their membership in good standing for 1919 in the state and county branches of the organization. A failure to provide themselves with such a certificate will necessarily subject them to some delay in registering with its consequent annoyance not only to themselves but also to others desiring to record their attendance.

POSTOFFICE

An Association Postoffice will be maintained in connection with the Registration Bureau in the Ball Room on the Steel Pier. Guests are requested to order mail addressed to them "Care American Medical Association, Steel Pier, Atlantic City, N. J.," or to their hotels, as preferred.

MEETING PLACES AND HOTEL HEADQUARTERS



OPENING GENERAL MEETING
REGISTRATION BUREAU—SCIENTIFIC EXHIBIT—COMMERCIAL EXHIBIT—POST OFFICE—INFORMATION

KEY TO MAP

1. CHELSEA
2. SHELBURNE
3. DENNIS
4. MARLBOROUGH-BLENHEIM
5. BRIGHTON
6. TRAYMORE
7. ALAMAC
8. CHALFONTE
9. HADDON HALL
10. SEASIDE
11. BOTHWELL
12. BLACKSTONE
13. ST. CHARLES
14. BREAKERS
15. ROYAL PALACE
16. FIRST PRESBYTERIAN *CHURCH*
17. CRAIG HALL
18. ST. PAUL'S CHURCH

The following have been designated as general and section headquarters and meeting places* for the Victory Meeting—the Atlantic City Session, June 9 to 13:

House of Delegates: *Traymore Library.*

Practice of Medicine: Dennis. *St. Paul's Church, Auditorium* (all meetings).

Surgery, General and Abdominal: Chalfonte-Haddon Hall. *First Presbyterian Church, Auditorium* (all meetings).

Obstetrics, Gynecology and Abdominal Surgery: Breakers. *First Presbyterian Church, Auditorium* (Wednesday and Friday); *First Presbyterian Church, Chapel* (Thursday).

Ophthalmology: Traymore. *Traymore, Rose Room* (all meetings).

Laryngology, Otology and Rhinology: Chelsea. *Traymore, Belvidere* (all meetings).

Diseases of Children: Seaside. *St. Paul's Church, Chapel* (all meetings).

Pharmacology and Therapeutics: Arlington. *St. Paul's Church, Lecture Room* (Wednesday and Thursday); *St. Paul's Church, Auditorium* (Friday).

Stomatology: Craig Hall. *Royal Palace, Hall B* (all meetings).

Pathology and Physiology: Royal Palace. *Royal Palace, Hall A* (Wednesday and Thursday); *St. Paul's Church, Auditorium* (Friday).

Nervous and Mental Diseases: Brighton. *Brighton, Casino* (all meetings).

Dermatology: Blackstone. *Traymore, Belvidere* (Wednesday and Friday); *Seaside* (Thursday).

Preventive Medicine and Public Health: Shelburne. *Breakers, Egyptian Room* (Wednesday and Thursday); *St. Paul's Church, Auditorium* (Friday).

Genito-Urinary Diseases: Alamac. *Brighton, Casino* (Wednesday and Friday); *Alamac* (Thursday).

Orthopedic Surgery: St. Charles. *Chalfonte, Room 17* (all meetings).

Gastro-Enterology and Proctology: Bothwell. *Chalfonte, Room 16* (all meetings).

Miscellaneous Topics: *Breakers, Egyptian Room* (all meetings).

General Headquarters: Marlborough-Blenheim.

Scientific Exhibit, Registration Bureau, Commercial Exhibit, Information Bureau, and Branch Postoffice: Steel Pier.

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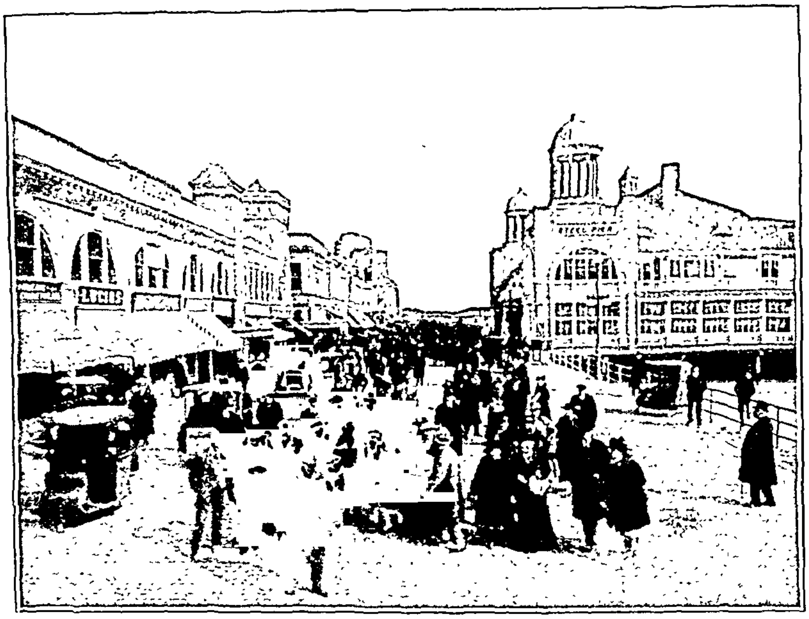
* Meeting places in italics.

TRANSPORTATION

Summer Tourist Rates Announced

The United States Railroad Administration, through chairmen of Passenger Traffic Committees, has advised that Summer Tourist rates will be in effect to Atlantic City, N. J., tickets being on sale from May 15 to September 30, with final return limit Oct. 31, 1919. Round trip fares from Chicago, it is announced, will be $49.02, and from St. Louis $57.96. However, there may be additional charge to cover war tax and extra fares. From other points round trip fares will be constructed on the basis of 90 per cent. of the double one way fare to Atlantic City, except that if this makes less than double the one way fare to Philadelphia, then the through rate to Atlantic City will be double the fare to Philadelphia. Those who are planning to go to Atlantic City for the Victory Meeting should consult the local ticket agent in their home town, in order to obtain full information regarding rates, time limits, extensions and stop-over privileges which may be had on railway tickets to Atlantic City. It is advisable to make these inquiries at an early date as local ticket agents may have to ask for the information needed and, except in the larger cities, it may be necessary to obtain a special form of ticket from some central ticket office. Neglecting to make such inquiry until just before the time for leaving home may make it necessary for the ticket agent to sell a full fare, one way ticket, since he may have neither the proper form nor the authority to sell these summer rate tickets. The importance of an early inquiry is emphasized.


Boardwalk showing entrance to the steel pier and the seaside block.

The American Medical Special

CHICAGO TO ATLANTIC CITY

"The American Medical Special" will be run for the accommodation of the Fellows of the Association who desire to go in a party from Chicago to Atlantic City to attend the Victory Meeting. This train is announced to run over the Pennsylvania Railway, leaving the Union Station, corner of Canal and Adams Streets, Chicago, at 10:30 a. m., Sunday, June 8. It is scheduled to arrive at Atlantic City on the following morning about 10 o'clock, in ample time to permit of being comfortably located at the hotel before the luncheon hour.

The train will be made up entirely of Pullman sleeping cars and will be provided with club and dining car service. No effort will be spared to provide accommodations so that the journey may be as comfortable and as pleasant for the Fellows who use this train as is possible. It will be noted the equipment is similar to that which has been placed at service of the Fellows on previous occasions. The one way fare from Chicago to Atlantic City on trains of this equipment is $33.69, and the round trip fare between Chicago and Atlantic City, good returning until October 31, and permitting of stop-over at any point enroute, will be $58.34. The cost of a lower berth, one way, is $5.40; upper berth, $4.32; drawing room, accommodating three persons, $19.44. The rates here quoted include war tax.

The attendance at the Victory Meeting promises to be large and those who are planning to attend will undoubtedly be attracted by the accommodations offered on this special. Without doubt, the available space will be quickly reserved, consequently, Fellows are urged to write at once to Mr. C. L. Kimball, Asst. General Passenger Agent, Pennsylvania Railroad, Room 841, 175 Jackson Boulevard, Chicago, in order that they may obtain further information and make reservation for sleeping car accommodations if they desire to use this train. Physicians from other cities of the West and Middle West may arrange to continue their trip from Chicago to the convention city on this train.

ACCOMODATIONS OFFERED BY ATLANTIC CITY HOTELS

Although Atlantic City is a city of hotels and can easily accommodate all who attend the annual session, Fellows are urged to make their hotel reservations early. This is especially advisable this year because many of the beach-front hotels are already booked practically to their full capacity for the week of the annual session.

The subcommittee on hotels of the local committee on arrangements, however, anticipates no trouble in accommodating with comfortable hotel accommodations those who visit Atlantic City, June 9 to 13. The Atlantic City physicians simply ask that reservations shall be arranged, as far as practicable, before the visitor starts for Atlantic City. Just as one is never so much alone as when he is a stranger in a large crowd, so the difficulties of securing hotel facilities in a city of hotels is accentuated. It will be more convenient on arriving at Atlantic City, to go at once to a hotel which is expecting you, rather than to make a round of hotels, finding a number of them completely filled, and finally being compelled to take the first lodgings which are found in a hurried personal search. The list of hotels appearing in this issue locates the different hotels and gives their rates. Make your selection, write to the manager, and take with you to Atlantic City his reply, assuring you that a reservation has been made for your use. The subcommittee on hotels, of the local committee on arrangements, Dr. D. B. Allman, chairman, will endeavor to assist you to get into communication with the manager of a hotel where you can make reservations if you find difficulty, by direct correspondence, in securing the lodgings you desire. In writing to Dr. Allman, Fellows should state the number in their party, when they expect to arrive in Atlantic City, how long they plan to remain and approximately the amount per day per person they are prepared to pay for hotel expenses. One may well leave to the local committee, as far as practicable, the choice of the hotel.

TABLES OF DAILY RATES AND ACCOMMODATIONS OFFERED BY ATLANTIC CITY HOTELS

Hotels Grouped by Streets	Plan	Rooms Without Private Bath				Rooms With Private Bath			
		For One Person		For Two Persons		For One Person		For Two Persons	
		Single Room	Double Room	Double Room	Extra Large Room	Single Room	Double Room	Double Room	Extra Large Room
Boardwalk—									
Royal Palace	American	$5.00	$7.00	$10.00	$11.00	$9.00 to	$11.00	$14.00 to	$20.00
Breakers	American	6.00	....	12.00 to	15.00	7.00 to	10.00	14.00 to	20.00
Breakers	European	2.50	....	4.00 to	8.00	4.00 to	7.00	6.00 to	12.00
St. Charles	American	6.00	7.00	10.00	11.00	8.00 to	16.00	12.00 to	20.00
Haddon Hall	American	5.00 to	7.00	10.00 to	12.00	7.00 to	10.00	12.00 to	16.00
Chalfonte	American	5.00 to	7.00	10.00 to	12.00	7.00 to	10.00	12.00 to	16.00
Regent	European	1.50	2.00	3.00	4.00	3.00	4.00	5.00	6.00
Alamac	American	8.00	....	12.00	14.00	8.00	9.00	14.00	18.00
Alamac	European	4.00	....	5.00	6.00	5.00	6.00	7.00	10.00
Apollo	European	1.50	2.00	2.50	....	2.50	3.50	3.50	....
Traymore	American	8.00	....	13.00	....	9.00	18.00	14.00	24.00
Traymore	European	4.00	....	5.00	....	5.00	14.00	6.00	16.00
Brighton	American	6.00	8.00	12.00	14.00	8.00	11.00	14.00	22.00
Marlborough-Blenheim	American	7.00	8.00	12.00	.....	10.00	11.00	14.00 to	21.00
Marlborough-Blenheim	European	4.00	5.00	7.00	.....	7.00	8.00	9.00	16.00
Dennis	American	6.00 to	8.00	9.00	11.00	7.00 to	15.00	12.00 to	18.00
Shelburne	European	3.00	4.00	5.00	6 00	5.00	7.00	10.00	12.00
Chelsea	American	6.00	7.00	11.00	13.00	8.00	10.00	14.00	16.00
Ambassador	American	....	....	....	....	....	10 00	14.00	20.00
Ambassador	European	....	....	....	....	....	6.00	8.00	14.00
Oriental Avenue—									
Touraine	American	3.50	4.00	7 00	....	5.00	5.00	8.00	....
Touraine	European	2.00	2.50	3.00	....	3.50	3.50	4.00	....
Glenside	American	3.00	3.50	5.00	6 00	3.50	4.00	7.00	8.00
Glenside	European	2.00	2.50	3.00	3.50	2.50	3.50	6.00	7.00
Massachusetts Avenue—									
Phillips House	American	4.00 to	7.00	8.00 to	10.00	....	8.00	10.00 to	12.00
Phillips House	European	1.50 to	2.50	3.00 to	5.00	....	4.00	5.00 to	5.00
Thurber	European	1.50	2.50	3.00	5.00	....	4.00	5.00	6.00
New Jersey Avenue—									
Pierrepont	American	4.00	5.00	8.00	9.00	5.00	6.00	10.00	11.00
Lancken Cottage	European	1.50	2.00	2.00	2.00	....	....	....	....
St. Charles Place—									
Loraine	American	4.00	....	8.00	9.00	....	....	10.00	12.00
Maryland Avenue—									
Schafer Villa	European	1.25	....	2.00	2.50	....	....	....	....
Virginia Avenue—									
Blackstone	American	4.00	4.50	8.00	9.00	6.00	6.50	10.00	12.00
Blackstone	European	2.00	2.50	3.00	4.00	3.50	4.00	5.00	6.00
Berkshire Inn	American	3.00	3.50	6.00	7.00	4.00	5 00	8.00	9.00
Berkshire Inn	European	1.50	2.00	3.00	4.00	2.50	3.00	5.00	6.00
Romm	European	1.25	2.00	2.50	3.00	2.00	2.00	4.00	4.50
Whittier	American	3.50	....	6.00	7.00	....	....	....	....
Whittier	European	2.00	....	4.00	5.00	....	....	....	....
New Florence	American	3.50	4.00	7.00	8.00	....	....	10.00	....
New Florence	European	1.00	1.50	3.00	4.00	....	....	5.00	....
Victor Hall	American	....	3.00	5.00	6.00	....	....	....	....
Victor Hall	European	....	2.00	3.00	4.00	....	....	....	....
Majestic	American	3.50	4.00	6.00	7.00	....	5.00	8.00	10.00
Majestic	European	1.50	2.00	3.00	4.00	....	3.50	5.00	6.00
Grand Atlantic	American	3.50	4.00	6.50	7.00	....	7.00	8.00	10.00
Grand Atlantic	European	2.00	3.00	3.50	4.00	....	....	....	....
Calvert	American	3.50	4.00	6.00	8.00	5.00	5.50	9.00	10.00
Calvert	European	1.50	2.00	3.00	4.00	3.00	3.50	5.00	6.00
Jackson	American	....	5.00	10.00	12.00	....	7.00	14.00	15.00
Jackson	European	....	2.50	4.00	5.00	....	4.00	8.00	9.00
Bothwell	American	4.00	4.50	8.00	9.00	....	....	12.00	14.00
Bothwell	European	1.50	2.00	3.00	4.00	3.00	3.50	5.00	6.00
Wiltshire	American	4.00	5.00	7.00	8.00	....	....	10.00	12.00
Sothern	American	3.00	3.50	6.00	7.00	....	....	8.00	9.00
Sothern	European	1.50	2.00	3.00	3.50	....	....	4.00	....
Morton	American	4.00	5.00	7.00	8.00	....	....	9.00	10.00
Raymond	American	3.00	3.50	6.00	7.00	....	....	8.00	9.00
Raymond	European	1.50	1.50	2.00	3.00	....	....	....	....
Absecon	American	3.50	3.50	5.00	6.00	5.00	6.00	8.00	9.00
Absecon	European	1.50	2.00	2.50	3.00	3.00	....	6.00	....
Shoreham	American	2.50	3.00	5.00	6.00	4.00	5.00	8.00	10.00
Shoreham	European	1.50	1.50	2.50	3.00	2.50	3.00	5.00	6.00
Albemarle	American	3.00	3.50	5.00	6.00	....	....	10.00	....
Albemarle	European	1.50	2.00	3.00	4.00	....	....	....	....
Pennsylvania Avenue—									
Holmhurst	American	4.00	5.00	10.00	12.00	....	....	12.00	14.00
Holmhurst	European	2.50	3.00	.....	5.00	....	....	6.00	7.00
Upton	American	3.00	3.50	5.00	6.00	....	....	....	....
St. Clare	American	3.00	4.00	6.00	7.00	....	5.00	10.00	12.00
North Carolina Avenue—									
Colonial	American	3.00	4.00	5.00	6.00	3.50	5.00	6.00	7.00
South Carolina Avenue—									
DeLancey-Lakewood	American	3.00	....	5.00	....	....	....	....	....
Rose Lynn	European	1.00	1 50	2.00	2.50	....	....	....	....
Silverside	American	3.00	3.50	6.00	7.00	....	....	....	....
Radnor	American	2.00	2.50	4.00	5.00	....	....	....	....
Radnor	European	1.00	1.50	2.00	3.00	....	....	....	....
Watkins	American	3.00	....	5.00	6.00	....	....	....	....
Watkins	European	1.50	....	3.00	4.00	....	....	....	....
Mullica	American	2.50	3.00	5.00	6.00	....	....	....	....
Mullica	European	1.00	2.00	3.00	4.00	....	....	....	....
Trexler	American	3.00	4.00	5.00	6.00	....	....	....	....
Princess	American	4.00	5.00	8.00	9.00	....	....	....	....
Princess	European	1.00	1.50	2.00	3.00	....	....	....	....
Iroquois	American	4.00	7.00	7.00	8.00	....	....	9.00	10.00
Iroquois	European	1.50	....	3.00	4.00	2.00	....	4.00	5.00

TABLE OF DAILY RATES AND ACCOMMODATIONS OFFERED BY ATLANTIC CITY HOTELS—*(Continued)*

Hotels Grouped by Streets	Plan	Rooms Without Private Bath				Rooms With Private Bath			
		For One Person		For Two Persons		For One Person		For Two Persons	
		Single Room	Double Room	Double Room	Extra Large Room	Single Room	Double Room	Double Room	Extra Large Room
Ocean Avenue—									
Bon Air	American	2.75	3.00	5.50	5.50	....	....	....	....
Kingston	American	3.00	3.50	5.00	6.00	4.00	5.00	7.00	8.00
Kingston	European	1.50	2.00	2.50	3.00	2.50	3.50	4.00	5.00
Tennessee Avenue—									
National	European	1.50	2.00	2.00	3.00	....	....	5.00	5.00
Elberon	American	3.00	3.00	5.00	6.00	3.00	3.50	7.00	8.00
Continental	American	3.50	4.00	7.00	8.00	5.00	6.00	9.00	10.00
Continental	European	1.50	2.00	2.00	3.00	2.50	3.00	5.00	6.00
Fredonia	European	1.50	2.00	2.50	3.00	2.00	2.50	4.00	5.00
Howard House	American	3.00	....	6.00	7.00	....	....	....	....
Howard House	European	1.50	....	3.00	3.50	....	....	....	....
Greater Pittsburgh	American	2.50	3.00	4.00	5.00	....	....	....	....
Greater Pittsburgh	European	1.50	2.00	2.00	3.00	....	....	....	....
Beaumont	American	....	....	5.00	....	....	....	....	....
Beaumont	European	....	....	2.00	....	....	....	....	....
Kenwood	American	2.00	2.50	4.00	5.00	....	....	....	....
Kenwood	European	1.00	1.50	2.00	3.00	....	....	....	....
Kenderton	American	3.00	3.50	5.00 to	8.00	....	5.00	8.00	9.00
Kenderton	European	1.00	1.50	2.50 to	4.00	....	3.00	4.00	5.00
St. James Place—									
Flanders	American	3.00	....	5.00	....	....	....	....	....
Elwood	American	3.00	3.50	5.00	6.00	3.50	....	6.00	....
Elwood	European	1.50	2.00	3.00	4.00	2.50	....	4.00	....
Devonshire	American	4.00	4.00	8.00	....	....	....	9.00	....
Thompson	American	....	2.50	4.00	5.00	....	....	....	....
New York Avenue—									
Breslin	European	2.00	3.00	3.00	5.00	2.50	....	6.00	....
Hygeia	European	1.00	1.00	2.00	2.00	1.50	1.50	2.50	2.50
Bingham	European	1.00	1.00	2.00	2.00	1.50	1.50	2.50	2.50
Netherlands	American	2.50	3.00	5.00	6.00	4.00	5.00	8.00	9.00
Belleville	American	2.50	3.50	5.50	6.00	....	....	....	....
Bellevilile	European	1.50	2.00	2.50	3.00	....	....	....	....
Chester Inn	American	2.50	3.00	5.00	6.00	3.00	3.50	6.00	7.00
Chester Inn	European	1.50	2.00	3.00	4.00	2.50	3.00	5.00	6.00
Kentucky Avenue—									
Martinique	European	2.50	3.00	4.00	5.00	5.00	6.00	7.00	8.00
New Clarion	American	3.00	3.50	5.00	6.00	3.50	4.00	6.00 to	8.00
New Clarion	European	1.50	2.00	2.00	3.00	2.00	2.50	3.00	3.50
De Ville	American	3.00	....	6.00	7.00	....	5.00	....	9.00
De Ville	European	1.00	1.50	2.00	3.00	....	2.00	3.00	4.00
Monticello	American	3.50	4.00	6.00	7.00	5.00	6.00	8.00	9.00
Monticello	European	1.50	2.00	2.50	3.00	3.00	4.00	4.00	5.00
Wellsboro	American	2.50	3.00	5.00	6.00	4.00	5.00	6.00	7.00
Wellsboro	European	1.00	1.50	2.00	3.00	3.00	4.00	4.00	5.00
Westminster	American	3.00	3.50	5.00	6.00	4.00	5.00	7.00	8.00
Westminster	European	1.50	2.00	3.00	4.00	2.00	2.50	4.00	5.00
Silverton	American	2.50	....	4.00	....	....	....	....	....
Silverton	European	1.50	....	2.50	....	....	....	....	....
Richmond	American	3.00	4.00	6.00	8.00	....	....	....	....
Richmond	European	1.50	2.00	3.00	4.00	....	....	....	....
Carnix	American	2.50	....	4.00	....	....	....	....	....
Carnix	European	1.75	....	3.00	....	....	....	....	....
Strath Haven	European	1.00	2.00	3.00	5.00	2.00	2.50	6.00	8.00
Illinois Avenue—									
Craig Hall	American	3.50	4.50	6.00	7.00	4.50	5.50	7.00	9.00
Merle Cottage	European	1.50	2.00	4.00	5.00	3.00	3.00	....	....
N. L. Burkhart, 125 S. Illinois Ave.	E	1.00	1.50	2.00	2.50	....	....	....	....
Park Place—									
Glaslyn-Chatham	American	3.50	....	6.00	7.00	5.00	....	7.00	8.00
Cheltenham-Revere	American	3.50	4.50	6.00	7.00	....	6.00	9.00	10.00
Runnymede	American	3.50	4.00	7.00	8.00	6.00	6.00	10.00	12.00
Michigan Avenue—									
Pennhurst	American	4.00	5.00	7.00	8.00	7.00	8.00	10.00	14.00
Arlington	American	3.50	4.00	6.00	7.00	6.00	7.00	9.00	10.00
Arlington	European	1.50	2.00	2.50	3.00	....	....	....	....
Edison	American	....	3.00	5.50	6.00	4.50	5.00	7.00	....
Edison	European	....	2.00	2.50	4.00	3.00	3.50	4.00	....
Bayard	European	....	1.50	3.00	4.00	....	4.00	5.00	6.00
St. Francis	European	1.00	1.50	2.50	3.00	....	2.50	4.00	4.50
Arkansas Avenue—									
Terminal	European	1.00	2.00	2.00	3.00	3.50	4.00	4.00	5.00
Emmett	American	2.00	2.50	4.00	4.50	....	....	....	....
Emmett	European	.75	1.00	1.50	2.00	....	....	....	....
Missouri Avenue—									
Worthington	American	2.50	3.00	....	....	....	....	7.00	....
Georgia Avenue—									
Miller Cottage	American	....	....	4.00	5.00	....	....	....	....
Pacific Avenue—									
Y. M. C. A.	European	1.00	....	1.50	....	(For Members Only)			
Godwin	European	2.00	3.00	5.00	5.00	....	....	....	....
Arondale	American	2.00	2.50	4.00	5.00	....	....	....	....
Arondale	European	1.00	1.50	2.00	2.50	....	....	....	....
Channel	American	2.50	2.75	4.50	5.00	3.00	3.25	6.00	6.00
Channel	European	1.00	1.25	2.00	2.50	1.50	1.75	3.00	3.00
Arctic Avenue—									
Wright's (Colored)	European	1.50	....	3.00	5.00	....	....	....	....
Wright's	American	4.00	....	8.00	10.00	....	....	....	....
Ridley's (Colored)	American	2.00	4.00	4.00	5.00	....	....	....	....
Ridley's	European	1.00	2.00	2.00	2.50	....	....	....	....

SOCIAL EVENTS AND SPECIAL MEETINGS

(Note.—The official badge will be required for admission to entertainments and other places to which entrance is granted to those in attendance on the annual session.)

MONDAY

The fifth tournament of the American Medical Golfing Association will be played on the links of the Atlantic City Golfing Club. Luncheon will be served at the Club House from 12 to 2, and the annual dinner of the Association as well as its business meeting will be held in the evening. Any Fellow of the American Medical Association becomes a Fellow of this Association automatically on acceptance of its by-laws and the payment of the enrolment fee of $2. For further information address Dr. Will Walters, secretary-treasurer, 1414 Chicago Avenue, Evanston, Ill. Visiting foreign physicians are invited to attend this tournament.

TUESDAY

The opening general meeting will be convened in the Music Hall on the Steel Pier at 8:30 p. m: In addition to the usual opening program, including the President's address, the foreign guests will be formally introduced.

WEDNESDAY

A Victory Meeting will be held in the Music Hall on the Steel Pier, convening at 8:30 p. m. At this meeting national organizations, the activities of each of which have definite medical interest, will be represented by speakers of their choice. Each speaker will be asked to respond with a short address on the general subject of American medicine and surgery as it responded in service under war conditions.

THURSDAY

At 2 in the afternoon, two large general meetings will convene on the Garden Pier. At these meetings representatives of the medical profession of foreign countries, and particularly those allied to the United States in the World War, will make addresses. At one of these meetings the subjects discussed will pertain to general medicine; the other will be devoted to surgical topics.

PRESIDENT'S RECEPTION

On Thursday evening at 8:30 o'clock, again on the Garden Pier, there will be a reception to the President of the Association and to the foreign guests.

Panorama from the Casino on the steel pier. Reading from left to right are: the Blackstone Hotel, bathing beaches, the Globe Theater; the tall building at the right, the St. Charles Hotel, and at the extreme right, the Breakers Hotel. The beach indicated is one of the best bathing beaches in Atlantic City.

INVITED GUESTS FROM FOREIGN COUNTRIES

By the authority of the Hon. Newton D. Baker, Secretary of War of the United States of America, the American Medical Association has requested the governments of the nations allied to the United States in the prosecution of the World War, through their several embassies and legations, to send representative delegations of the medical professions of their countries to participate in the coming annual session of the Association. A prominent feature of the 1919 annual session will thus be the bringing together of a representative medical assemblage to confer on the medical knowledge which has grown out of the war; to elaborate plans for cooperative interallied graduate study and research, and to cement the bonds of an enduring friendship among physicians. A number of the governments have indicated their purpose to appoint the delegates requested. Some of them have already officially advised the American Medical Association of those who have been appointed to represent the medical profession of their countries. The coming annual session will be indeed a Victory Meeting since it will bring together representatives of the medical profession of all the allied nations as well as of a number of the neutral powers. Belgium, Great Britain, Cuba, Norway and we understand France already have noted physicians in the United States.

HEADQUARTERS FOR WOMEN PHYSICIANS

Hotel Holmhurst will be the headquarters for women physicians who attend the Victory Meeting. Women physicians may secure reservations by writing directly to the management of this hotel. The dinner for women physicians will be held on Wednesday evening, June 11, at the Marlborough-Blenheim at 6:30 o'clock. The subscription price is $4 a cover. Contributions should be sent on before June 6 to Dr. Clara K. Bartlett, 4301 Atlantic Avenue, Atlantic City, N. J. Attention is called to the corrected date here given, as this dinner previously was announced for the evening of Monday, June 9.

SECTION DINNERS AND ALUMNI MEETINGS

While the program for the Atlantic City meeting is already well filled, it may be that certain sections will want to return to the custom of holding a social gathering which will not conflict with the sections. Alumni of medical schools are planning to revive their annual reunions. The Local Committee on Arrangements, through its subcommittee on Section Entertainments, Samuel Barbash, chairman, will cooperate with officers of sections and through the subcommittee on Alumni Entertainments, Worth Clark, chairman, will assist in arranging the latter functions.

MEETINGS OF NON-AFFILIATED ORGANIZATIONS

Medical Veterans of the World War

The temporary officers of the Medical Veterans of the World War are arranging for a meeting to be convened in Atlantic City on the afternoon of Tuesday, June 10, for the purpose of effecting a permanent organization. Blank forms for making application for membership in this organization may be obtained either from the office of the temporary secretary, Col. F. F. Russell, Medical Corps, U. S. Army, Army Medical School, Washington, D. C., or from the temporary president, Dr. Hubert Work, Pueblo, Colo., or by sending a self-addressed envelope to the headquarters of the American Medical Association. These forms have also been placed in the hands of those physicians who served as medical aids to the governors of the several states in the establishment and conduct of the medical advisory boards, and it is planned to shortly place a supply with the secretaries of the several constituent state associations. Those who are eligible for membership and who desire to make application should obtain and use these forms. Each application should be accompanied with a fee of one dollar, to apply to the expenses of organization. It is further planned to hold a meeting of this organization on the evening of Friday, June 13, at Atlantic City.

Meetings of Special Societies

In addition, the following organizations have announced meetings to be held at Atlantic City during the days immediately preceding the dates for the scientific assembly of the Association: American Academy of Medicine; American Association of Anesthetists; American Association of Industrial Physicians and Surgeons; American Association of Teachers of Diseases of Children; American Proctologic Society; American Therapeutic Society. During the week following the VICTORY MEETING of the Association, the Congress of American Physicians and Surgeons will hold its triannual conference at Atlantic City. At this time, June 16 to 17, the following organizations will hold their meetings: American Association of Genito-Urinary Surgeons; American Association of Pathologists and Bacteriologists; American Association of Physicians; American Climatological and Clinical Association; American Dermatological Association; American Neurological Association; American Ophthalmological Society; American Pediatric Society; American Psychopathological Association; American Society of Tropical Medicine; American Surgical Association. On June 18 to 20, the American Medico-Psychological Association will meet at Philadelphia.

THE SCIENTIFIC EXHIBIT

The feature of the Scientific Exhibit at the Atlantic City meeting will be the exhibition by the different government departments of scientific work done during and in connection with the war. As the session is to be a VICTORY MEETING, it was decided to make the Scientific Exhibit center largely around the work done for and by the government. Accordingly invitations were sent to each of the government departments, asking them to prepare and present an exhibit of the work done. Nine bureaus or division belonging to six departments have accepted the invitation and will present exhibits. This is in addition to the customary exhibit of individual research. The Scientific Exhibit promises to be one of unusual value and interest. The exhibits of the Army, Navy and Public Health Service will be located in the Exposition Building, Board Walk and Kentucky Avenue. All other exhibits will be on the ground floor of the Casino, on the Steel Pier. The exhibitors are as follows:

Government Exhibits

SHOWING THE WORK OF THE VARIOUS DEPARTMENTS AND BUREAUS RELATING TO HEALTH

Medical Department, U. S. Army.
Bureau of Medicine and Surgery, U. S. Navy.
United States Public Health Service.
Department of Agriculture, Bureau of Chemistry.
Department of Agriculture, Bureau of Entomology.
Department of Commerce, Bureau of Standards.
Department of Commerce, Bureau of the Census.
Department of Labor, Children's Bureau.
American Red Cross.

Individual Exhibitors

DR. EMIL G. BECK, Chicago: Stereoscopic Roentgenograms and Stereo-Lunnier Photography of Specimens.

ROENTGEN-RAY DEPARTMENT, BELLEVUE AND ALLIED HOSPITALS, New York: Roentgenology—Teaching Methods and Specimens.

DRS. JAMES T. CASE AND PAUL ROTH, Battle Creek Sanitarium, Battle Creek, Mich.: Dietetic Management of Diabetics; Bergell Test; Electrocardiograms; Roentgenograms.

DR. J. SHELTON HORSLEY, Richmond, Va.: Illustrations of Operations on the Gastro-Intestinal Tract Based on Physiology of the Stomach and Intestines.

LYING-IN HOSPITAL OF THE CITY OF NEW YORK: Museum Specimens and Wall Charts.

DR. MYRON METZENBAUM, Cleveland: Nasal Deformities Showing Photographs of Cases Before and After Operations.

THE MAYO CLINIC, Rochester, Minn.: Scientific Material from the Mayo Clinic Staff.

DR. HIDEYO NOGUCHI, Rochefeller Institute, New York: Experimental Work on Yellow Fever.

PRUDENTIAL INSURANCE COMPANY, Newark, N. J.: Statistical Charts on Influenza.

ST. LUKE'S HOSPITAL, New York: Roentgen-Ray Plates and Prints.

DR. FENTON B. TURCK, New York: Experimental Shock, Experimental War Wounds and Other Injuries; Pneumonias.

DR. D. T. QUIGLEY, Omaha: Results of Treatment by Radium.

DR. A. S. WARTHIN, Ann Arbor, Mich.: Pathology of Mustard Gas Poisoning; Photographic Specimens.

American Medical Association

COUNCIL ON PHARMACY AND CHEMISTRY: Charts and Samples Showing Activities of the Council with Copies of Publications.

CHEMICAL LABORATORY: Charts and Samples Showing Chemical Work of Laboratory.

PROPAGANDA DEPARTMENT: Educational Charts and Literature on Nostrums and Quackery.

COUNCIL ON HEALTH AND PUBLIC INSTRUCTION: Educational Pamphlets, Charts and Diagrams on Public Health.

Moving Picture Exhibit

The moving picture theater on the second floor of the Casino will be conducted as a part of the Scientific Exhibit. from 9 a. m. to 3 p. m. on Tuesday, Wednesday, Thursday and Friday, June 10, 11, 12 and 13. Moving picture films showing the work of medical officers in the Army and Navy and the activities of the Public Health Service will be shown, also material by private exhibitors. An illustrated talk will be given each day by the Propaganda Department of THE JOURNAL. A detailed program of the moving picture exhibit will appear in the official program.

PRELIMINARY PROGRAM OF THE SCIENTIFIC ASSEMBLY

PROGRAM OF THE OPENING MEETING

STEEL PIER, MUSIC HALL

Tuesday, June 10, 8:30 p. m.

Music.

Call to Order by the President, Dr. Arthur Dean Bevan, Chicago.

Invocation. Abner H. Lucas, Ph.D., D.D., Atlantic City.

Announcements. Dr. Emery Marvel, Chairman of the Local Committee of Arrangements.

Address of Welcome. Hon. Harry Bacharach, Mayor, Atlantic City.

Address of Welcome. Dr. Thomas Harvey, Orange, N. J., President of the Medical Society of New Jersey.

Address. Hon. Walter E. Edge, Governor of New Jersey, U. S. Senator-Elect.

Music.

Introduction and Installation of President-Elect Alexander Lambert, New York.

Address. Dr. Alexander Lambert.

INTRODUCTION OF DELEGATES FROM OTHER COUNTRIES

Music.

THE PROGRAMS OF THE SECTIONS

Outline of the Scientific Proceedings — The Preliminary Program and the Official Program

The following papers are announced to be read before the various sections. The order here is not necessarily the order which will be followed in the Official Program nor is the list complete. The Official Program will be a pamphlet similar to those issued in previous years, and will contain the final program of each section with abstracts of the papers, also lists of committees, programs of the General Meeting, lists of entertainments, map of Atlantic City and other information. To prevent misunderstandings and to protect the interest of advertisers, it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each Fellow on registration.

SECTION ON MISCELLANEOUS TOPICS

There will be two meetings for the discussion of Industrial Medicine and Surgery—five or six additional papers are being considered. The completed program will be announced in the Official Program.

MEETS IN BREAKERS, EGYPTIAN ROOM—ALL MEETINGS

Chairman—Harry E. Mock, Chicago.
Vice Chairman—David L. Edsall, Boston.
Secretary—Otto P. Geier, Cincinnati.

Wednesday, June 11—2 p. m.

Meeting Place—Breakers, Egyptian Room

SYMPOSIUM—SCOPE OF INDUSTRIAL MEDICINE AND SURGERY

Chairman's Address. Harry E. Mock, Chicago.

Preventive Surgery, as Demonstrated by Industrial Practice. William I. Clarke, Jr., Worcester, Mass.
Discussion to be opened by William O'N. Sherman, Pittsburgh; Charles G. Farnum, Peoria, Ill., and Arthur M. Corwin, Chicago.

Industrial Medical Practice and Sickness Prevention as a Factor in Public Health. C. E. Ford, New York.
Discussion to be opened by William Alfred Sawyer, Philadelphia.

The Enlarged Program of the U. S. Public Health Service, Division of Industrial Hygiene and Medicine.
Joseph W. Schereschewsky, Washington, D. C.

International Aspect of Public Health as Related to Industrial Hygiene.
George A. Soper, Sanitary Corps, U. S. Army.

Discussion of Papers 4, 5 and 6.

General Discussion of the Symposium.
Discussion to be opened by Francis D. Patterson, Harrisburg, Pa.

Friday, June 13—2 p. m.

Meeting Place—Breakers, Egyptian Room

SYMPOSIUM—SOME FUTURE ASPECTS OF INDUSTRIAL MEDICINE AND SURGERY

Modernizing Our Medical College by Adding Departments of Industrial Medicine and Public Health.
Otto P. Geier, Cincinnati.
Discussion to be opened by David L. Edsall, Boston.

Medical Service for the Small Industrial Units.
Clarence D. Selby, Toledo, Ohio.

SECTION ON PRACTICE OF MEDICINE

MEETS IN ST. PAUL'S CHURCH, AUDITORIUM—ALL MEETINGS

OFFICERS OF SECTION

Chairman—Walter L. Bierring, Des Moines, Iowa.
Vice Chairman—C. G. Jennings, Detroit.
Secretary—J. S. McLester, Birmingham, Ala.
Acting Secretary—Joseph H. Pratt, Boston.
Executive Committee—Roger S. Morris, Cincinnati; Henry A. Christian, Boston; Lawrence Litchfield, Pittsburgh.
(Stenographer—Dr. W. W. Bellamy, Boston)

Wednesday, June 11—9 a. m.

Meeting Place—St. Paul's Church, Auditorium

1. Chairman's Address: Relations of Internists to Military Medicine. Walter L. Bierring, Des Moines, Iowa.
2. The Basal Metabolism and Alimentary Hyperglycemia Test of Thyrotoxicosis.
W. G. McCaskey, Fort Wayne, Ind.
Discussion to be opened by Alfred C. Crofton, Chicago, and John E. Greiwe, Cincinnati.
3. The Value of the Basal Metabolic Rate in the Diagnosis of Hyperthyroidism.
Henry S. Plummer, Rochester, Minn.
4. The Clinical, Functional and Pathologic Observations on Some Cases of Chronic Nephritis.
James P. O'Hare, Boston.
Discussion to be opened by Leonard G. Rowntree, Minneapolis.
5. Dietotherapy in Metabolic Disease.
Frederick M. Allen, New York.
6. A Note on the Recognition of Tropical Sprue in the United States. Edward J. Wood, Wilmington, N. C.
Discutssion to be opened by Douglas Vanderhoof, Richmond, and Andrew W. Sellards, Boston.
7. Hypertension in Women with Remarks on Etiology, Prognosis and Treatment. David Riesman, Philadelphia.

Thursday, June 12—9 a. m.

Meeting Place—St. Paul's Church, Auditorium

Election of Officers

8. The Clinical Study of Pulmonary Excursion.
Charles F. Hoover, Cleveland.
9. Errors in the Diagnosis of Chronic Pulmonary Tuberculosis.
Thomas McCrae and Elmer H. Funk, Philadelphia.
10. Studies of Arthritis in the Army.
Ralph Pemberton, Philadelphia.
11. The Psychic Factor as an Element in Temperature Disturbance as Shown by Some Observations in the Selective Draft. Frank B. Wynn, Indianapolis.
Discussion to be opened by Charles D. Humes, Indianapolis.

12 The Importance of Physical Development in Cases of Effort Syndrome. Bertnard Smith, Los Angeles.
Discussion to be opened by Eveleth W. Bridgeman, Baltimore, and Francis W. Peabody, Boston.

13. Pericarditis as a Complication of Pneumonia Based on Three Hundred and Fifty Necropsies.
Willard J. Stone, Toledo, Ohio.

14. Effective and Practical Treatment of Malaria to Disinfect Infected Persons and Prevent Relapse.
Charles C. Bass, New Orleans.

Friday, June 13—9 a. m.

Meeting Place—St. Paul's Church, Auditorium

SYMPOSIUM ON MILITARY MEDICINE

BY INVITATION, WILLIAM S. THAYER, BALTIMORE, WILL PRESIDE

15. Problems of the Division.
Maurice C. Pincoffs, Chicago.

16. Problems of the Corps and Army.
George Draper, New York.

17. Poisonous Gases: Immediate Recognition and Evacuation of Gas Cases. Richard Dexter, Cleveland.

18. Poisonous Gases: Later Effects.
Alfred E. Cohn, New York.

19. Poisonous Gases: Pathology.
Alwin M. Pappenheimer, Hartsdale, N. Y.

20. Influenza. Warfield T. Longcope, New York.

21. The Treatment of Chest Injuries.
Marion A. Blankenhorn, Orrville, Ohio.

22. Aviation. Thomas R. Boggs, Baltimore.

23. Nephritis in the Soldier. Reginald Fitz, New York.

24. The Work of the Group Consultant.
Joseph A. Capps, Chicago.

25. The Work of the Group Consultant
Joseph Sailer, Philadelphia.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

MEETS IN FIRST PRESBYTERIAN CHURCH, AUDITORIUM—ALL MEETINGS

OFFICERS OF SECTION

Chairman—John T. Bottomley, Boston.
Vice Chairman—LeGrand Guerry, Columbia, S. C.
Secretary—Eugene H. Poole, New York.
Acting Secretary—George P. Müller, Philadelphia.
Executive Committee — E. Wyllys Andrews, Chicago; William D. Haggard, Nashville, Tenn.; E. Starr Judd, Rochester, Minn.

(Stenographer—Mrs. M. C. Repp, Philadelphia)

Wednesday, June 11—2 p. m.

Meeting Place—First Presbyterian Church, Auditorium

1. Chairman's Address. John T. Bottomley, Boston.

2. Traumatic or Wound Shock.
Walter B. Cannon, Boston.

3. Hemorrhage and Transfusion.
Bertram M. Bernheim, Baltimore.
Discussion to be opened by George W. Crile, Cleveland; Oswald H. Robertson, New York; Howard T. Karsner, Cleveland; Elmer J. Bissell, Rochester, N. Y., and Major G. Seelig, St. Louis.

4. "Débridement." Dean D. Lewis, Chicago.

5. Primary and Secondary Suture.
Eugene H. Pool, New York.
Discussion to be opened by Hugh Cabot, Boston; Fred W. Bailey, St. Louis; Wesley E. Drennan, Birmingham, Ala., and Frederick A. Besley, Chicago.

6. Gas Bacillus Infection.
Frederick T. Van Beuren, Jr., New York.

7. Sterilization of the Wound.
George A. Stewart, Baltimore.
Discussion to be opened by A. Depage, Belgium; James P. Hutchinson, Philadelphia; Arthur W. Elting, Albany, N. Y.; Henry H. M. Lyle, New York; James T. Pilcher, Brooklyn; Fred W. Bancroft, New York, and Hugh H. Trout, Roanoke, Va.

Thursday, June 12—9 a. m.

Meeting Place—First Presbyterian Church, Auditorium

Election of Officers

8. Opening Address. Charles H. Mayo, Rochester, Minn.

9. Brain Injuries. Harvey Cushing, Boston.
Discussion to be opened by Pedro Chutro, Buenos Aires; Kellogg Speed, Chicago; Harry H. Kerr, Washington, D. C., and Karl W. Ney, New Orleans.

10. Peripheral Nerve Injuries.
Charles H. Frazier, Philadelphia, and Samuel Silbert, New York.
Discussion to be opened by Martin B. Tinker, Ithaca, N. Y.; James F. Corbett, Minneapolis; Murray S. Danforth, Providence, R. I.; William W. Babcock, Philadelphia; Charles Bagley, Jr., Baltimore; Alfred W. Adson, Rochester, Minn., and Byron P. Stookey, Los Angeles.

11. Abdominal Injuries. George W. Crile, Cleveland.
Discussion to be opened by John B. Deaver, Philadelphia; John H. Gibbon, Philadelphia; Burton J. Lee, New York, and William Darrach, New York.

12. Chest Injuries. John L. Yates, Milwaukee.
Discussion to be opened by Arthur M. Shipley, Baltimore; William F. Verdi, New Haven, Conn., and Joseph G. Yocum, New York.

13. Maxillo-Facial Injuries. Vilray P. Blair, St. Louis.
Discussion to be opened by George E. deSchweinitz, Philadelphia; Harris P. Mosher, Boston; Robert H. Ivy, Milwaukee; William T. Coughlin, St. Louis, and George M. Dorrance, Philadelphia.

Friday, June 13—2 p. m.

Meeting Place—First Presbyterian Church, Auditorium

14. War Fractures. J. A. Blake, Paris

15. War Fractures. Maurice Heitz-Boyer, France.

16. War Fractures W. H. Groves, England.

17. Statistical Summary of War Fractures.
John B. Walker, New York.

18. Osteomyelitis After War Injury.
Pedro Chutro, Buenos Aires.

19. Restoration of Loss of Bone from Gunshot Wounds.
Fred H. Albee, New York.
Discussion to be opened by Frederick A. Besley, Chicago; George W. Hawley, Bridgeport, Conn.; Joseph R. Eastman, Indianapolis; Morris K. Smith, New York, and Ralph T. Knight, Minneapolis.

20. War Injuries of Joints. Vernon C. David, Chicago.
Discussion to be opened by Arthur M. Shipley, Baltimore; Burton J. Lee, New York, and Kellogg Speed, Chicago.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

MEETS, WEDNESDAY AND FRIDAY, IN FIRST PRESBYTERIAN CHURCH, AUDITORIUM; THURSDAY, IN FIRST PRESBYTERIAN CHURCH, CHAPEL

OFFICERS OF SECTION

Chairman—Thomas J. Watkins, Chicago.
Vice Chairman—T. W. Keefe, Providence, R. I.
Secretary—Sidney A. Chalfant, Pittsburgh.
Executive Committee—Edward Reynolds, Boston; Howard W. Longyear, Detroit; Brooke M. Anspach, Philadelphia.

Wednesday, June 11—9 a. m.

Meeting Place—First Presbyterian Church, Auditorium

1. Chairman's Address: Gynecology and Abdominal Surgery.
Thomas J. Watkins, Chicago.

2. Analysis of Fifty Cases of Uterine Bleeding from Causes Other Than Malignancy or Myoma Treated by Radium.
Samuel M. D. Clark, New Orleans.

3. Treatment of Myoma Uteri with Radium.
John G. Clark, Philadelphia.

4. Radium Treatment in Carcinoma of the Cervix and Body of the Uterus.
Howard A. Kelly and Curtis F. Burnam, Baltimore.
Discussion on papers 2, 3 and 4 to be opened by H. C. Bailey, New York; Ernest C. Samuel, New Orleans, and A. H. Curtis, Chicago.

5. The End-Results in Over One Hundred Operations for Uterine Myoma (Operative Versus Roentgen-Ray Treatment). Arthur Stein, New York.
6. The Teaching Function of the Hospital: With Especial Reference to Gynecology. George Gray Ward, Jr., New York.
   Discussion to be opened by Brooke M. Anspach, Philadelphia.
7. Alternating, Periodical Swellings of the Ovary. Emil Ries, Chicago.

Thursday, June 12—9 a. m.

Meeting Place—First Presbyterian Church, Chapel

Election of Officers

8. Uterine Retrodisplacement as a Cause of Reflex Neuroses. Peter B. Salatich, New Orleans.
   Discussion to be opened by Edward E. Montgomery, Philadelphia.
9. A Clinical Study of the Treatment of Dysmenorrhea. Jennings C. Litzenberg, Minneapolis.
10. If Possible Prevent Sterilization in Young Women When Operating for Tubercular Peritonitis. J. Henry Carstens, Detroit.
    Discussion to be opened by Lewis S. McMurtry, Louisville.
11. The Specialty of Obstetrics. Henry P. Newman, San Diego.
    Discussion opened by Edward P. Davis, Philadelphia.
12. The Newer Methods of Cesarean Section: Their Indications: Results in Forty Cases (Lantern Demonstration.) Joseph B. DeLee, Chicago.
    Discussion to be opened by James W. Markoe, New York, and Charles E. Paddock, Chicago.
13. Etiology and Treatment of Pernicious Nausea and Vomiting of Pregnancy. Frank W. Lynch, San Francisco.
    Discussion to be opened by Alfred Baker Spalding, San Francisco.
14. The Treatment of Abdominal Pregnancy After the Fifth Month (Lantern Demonstration). Alfred C. Beck, Brooklyn.
    Discussion to be opened by John O. Polak, Brooklyn.
15. Aspiration and Pressure Treatment of Unopened Mammary Abscesses (Puerperal). John Gardiner, Toledo.
    Discussion to be opened by Richard C. Norris, Philadelphia.

Friday, June 13—9 a. m.

Meeting Place—First Presbyterian Church, Auditorium

16. Trendelenburg Ether Anesthesia in Pelvic Surgery (Lantern Demonstration). Donald Guthrie, Sayre, Pa.
    Discussion to be opened by Raleigh R. Huggins, Pittsburgh.
17. Abdominal Surgery Under Local Anesthesia (Lantern Demonstration). Robert E. Farr, Minneapolis.
18. The Treatment of Gunshot Wounds of the Abdomen. John H. Gibbon, Philadelphia.
    Discussion to be opened by Edward W. Meredith, Pittsburgh.
19. The Efficiency of Surgical Treatment in the Bleeding Type of Gastric and Duodenal Ulcer. Donald C. Balfour, Rochester, Minn.
20. A New Operation for Duodenal and Gastric Ulcers (Lantern Demonstration). J. Shelton Horsley, Richmond, Va.
    Discussion to be opened by Albert E. Halstead, Chicago, and George W. Crile, Cleveland.
21. Rational Surgery of Visceroptosis (Lantern Demonstration). Roland Hazen, Paris, Ill.
    Discussion by Robert T. Morris, New York.
22. The Better Methods of Wound Treatment. Henry O. Marcy, Boston.
    Discussion to be opened by Frederick A. Besley, Chicago.

SECTION ON OPHTHALMOLOGY

MEETS IN TRAYMORE, ROSE ROOM—ALL MEETINGS

OFFICERS OF SECTION

Chairman—Cassius D. Wescott, Chicago.
Vice Chairman—Thomas B. Holloway, Philadelphia.
Secretary—Albert E. Bulson, Jr., Fort Wayne, Ind.
Executive Committee—Walter R. Parker, Detroit; William Zentmayer, Philadelphia; Alexander Duane, New York.
(Stenographer—James C. Marriott, New York)

Wednesday, June 11—9 a. m.

Meeting Place—Traymore, Rose Room

1. Chairman's Address. Cassius D. Wescott, Chicago.

SYMPOSIUM ON REFRACTION

2. Ophthalmologist and Physician. Charles P. Emerson, Indianapolis.
3. Necessary but Often Neglected Refinements in the Examination of Ocular Refraction. Walter L. Pyle, Philadelphia.
4. The Present Status of Refraction Work. Edwin J. Gardiner, Chicago.
5. The Correction of the Muscular Anomalies of the Eye of Only Less Importance Than That of Their Faults of Refraction. Samuel Theobald, Baltimore.
   Discussion of the Symposium to be opened by Edward Jackson, Denver; Albert E. Bulson, Jr., Fort Wayne, Ind.; Thomas B. Holloway, Philadelphia, and Isaac Hartshorn, New York.

EXHIBITION OF NEW INSTRUMENTS AND APPLIANCES

Wednesday, June 11—2 p. m.

Meeting Place—Traymore, Rose Room

6. The Organization and Activities of the Ophthalmic Service in the American Expeditionary Forces. Allen Greenwood, Boston.
   Discussion to be opened by James Bordley, Jr., Baltimore.
7. The Control of Trachoma Among the Alien Labor Companies of the British and American Expeditionary Forces. George S. Derby, Boston.
   Discussion to be opened by Allen Greenwood, Boston.
8. Group Study, a Necessity in Ophthalmic Research. F. Park Lewis, Buffalo.
   Discussion to be opened by Walter R. Parker, Detroit.
9. Daylight Illumination of Interiors. Edward Jackson, Denver.
   Discussion to be opened by Nelson M. Black, Milwaukee.
10. Family Degeneration of the Macula Lutea. Robert Blue, Chicago.
    Discussion to be opened by William Zentmayer, Philadelphia.

Thursday, June 12—9 a. m.

Meeting Place—Traymore, Rose Room

Election of Officers

Reports of Committees

11. The Action of Radium on Cataracts. Martin Cohen and Isaac Levin, New York.
    Discussion to be opened by E. V. L. Brown, Chicago.
12. Immediate Capsulotomy in the Extraction of Senile Cataract. Arthur G. Bennett, Buffalo.
    Discussion to be opened by Harry W. Woodruff, Joliet.
13. Adventitious Hyaloid Membrane Following Operation for Secondary Cataract. S. Lewis Ziegler, Philadelphia.
    Discussion to be opened by Alexander Duane, New York.
14. The Autotoxic Factor in Sympathetic Ophthalmia. Arnold Knapp, New York.
    Discussion to be opened by Harold Gifford, Omaha.
15. Treatment of Symblepharon and Restoration of the Orbital Socket. William H. Wilder, Chicago.
    Discussion to be opened by John E. Weeks, New York.
16. The Rôle of Teeth, Tonsils, and Toxemias of the Intestinal Tract in Relation to Diseases of the Eye. George Huston Bell, New York.
    Discussion to be opened by Hiram Woods, Baltimore.

Friday, June 13—9 a. m.

Meeting Place—Traymore, Rose Room

17. A New Operation for the Relief of Conical Cornea. L. Webster Fox, Philadelphia.
    Discussion to be opened by Walter B. Lancaster, Boston.
18. Uveitis. A. Edward Davis, New York.
    Discussion to be opened by George E. de Schweinitz, Philadelphia.
19. (1) Cysticercus of the Vitreous; (2) Congenital Multilocular Cysts in Relation with the Retina, and (3) Anterior Lenticonus, Being a Clinical Communication. George E. de Schweinitz, Philadelphia, and Meyer Wiener, St. Louis.
    Discussion to be opened by Frederick H. Verhoeff, Boston.
20. Foreign Bodies Within the Eyeball. John O. McReynolds, Dallas, Texas.
    Discussion to be opened by William M. Sweet, Philadelphia.
21. The Treatment of Dacriocystitis by Curettage. John Green, Jr., St. Louis.
    Discussion to be opened by William R. Thompson, Fort Worth, Texas.
22. Personal Observations Regarding the Treatment of Glaucoma. John E. Weeks, New York.
    Discussion to be opened by William Campbell Posey, Philadelphia.

SECTION ON LARYNGOLOGY, OTOLOGY, AND RHINOLOGY

MEETS IN TRAYMORE, BELVIDERE—ALL MEETINGS

OFFICERS OF SECTION

Chairman—Lee Wallace Dean, Iowa City, Iowa.
Vice Chairman—Eugene R. Lewis, Dubuque, Iowa.
Secretary—William B. Chamberlin, Cleveland.
Executive Committee—Hill Hastings, Los Angeles; Francis P. Emerson, Boston; Greenfield Sluder, St. Louis.
(Stenographer—Miss F. E. Dillon, Indianapolis)

Wednesday, June 11—9 a. m.

Meeting Place—Traymore, Belvidere

1. Chairman's Address. Lee Wallace Dean, Iowa City, Iowa.
2. Physiologic Mechanism of Sneezing and Nasal Hydrorrhea. Albert P. Brubaker, Philadelphia.
   Discussion to be opened by Wolf Freudenthal, New York.
3. Nasal Hydrorrhea. John A. Thompson, Cincinnati.
   Discussion to be opened by H. Holbrook Curtis, New York.
4. Asthma as a Nasal Reflex. Greenfield Sluder, St. Louis.
   Discussion to be opened by Emil Mayer, New York, and Orville H. Brown, Phoenix, Ariz.
5. Results Obtained in the Treatment of Hay-Fever (Pollen Disease) by Pollen Extracts.. Karl K. Koessler, Chicago.
   Discussion to be opened by George E. Shambaugh, Chicago.
6. Sphenopalatine Ganglion Neurosis. Harry L. Pollock, Chicago.
   Discussion to be opened by William Mithoefer, Cincinnati.
7. The Accessory Sinuses in Children. Seymour Oppenheimer, New York.
   Discussion to be opened by Charles Gilmore Kerley, New York.

Thursday, June 12—9 a. m.

Meeting Place—Traymore, Belvidere

Election of Officers

EXHIBITION OF NEW INSTRUMENTS AND APPLIANCES

Report of Committees

8. Arachidic Bronchitis. Chevalier Jackson, Philadelphia.
   Discussion to be opened by Edwin E. Graham, Philadelphia.
9. Influenza Croup, Diagnosed by Direct Examination of the Larynx. Henry L. Lynah, New York.
   Discussion to be opened by Hubert Arrowsmith, Brooklyn.
10. Relation of the Ear and Accessory Sinuses to Influenza During the Recent Epidemic, as Observed at the Walter Reed General Hospital, Takoma Park, D. C. Joseph H. Bryan, Washington, D. C., and C. Norman Howard, Warsaw, Ind.
    Discussion to be opened by George Fetterolf, Philadelphia, and H. J. Nichols, Washington, D. C.
11. The Surgery of the Facial Nerve for Chronic Peripheral Facial Paralysis. William Sharpe, New York.
    Discussion to be opened by Philip D. Kerrison, New York, B. Alexander Randall and S. MacCuen Smith, Philadelphia.
12. Reconstruction of the Defects in Hearing and Speech, As Carried Out by the Division of Physical Reconstruction, Surgeon-General's Office. Charles W. Richardson, Washington, D. C.
    Discussion to be opened by John M. Ingersoll, Cleveland.
13. Some Observations on the Present Status of Oto-Laryngology in America. Thomas J. Harris, New York.
    Discussion to be opened by Harris P. Mosher, Boston, and James F. McKernon, New York.
14. Abscess of the Brain: Its Surgical Treatment. Wells P. Eagleton, Newark, N. J.
    Discussion to be opened by John W. Murphy, Cincinnati, and George F. Cott, Buffalo.

Friday, June 13—9 a. m.

Meeting Place—Traymore, Belvidere

15. Mastoidectomy: Postoperative Treatment by Carrel-Dakin Solution and Results. John B. Potts, Omaha.
    Discussion to be opened by Ewing W. Day, Pittsburgh, and Arthur C. Stokes, Omaha.
16. Some Experiences of a Commanding Officer of a Base Hospital in France. Ross Hall Skillern, Philadelphia.
    Discussion to be opened by George M. Coates, Philadelphia.
17. Tranquil Tracheotomy by Injecting Cocain Within the Windpipe.
    Sir St. Clair Thompson (Guest of Honor), London, England.
    General Discussion.
18. Film: Fit to Fly. Air Service, Medical Corps, U. S. Army.

SECTION ON DISEASES OF CHILDREN

MEETS IN ST. PAUL'S CHURCH, CHAPEL—ALL MEETINGS

OFFICERS OF SECTION

Chairman—Frank P. Gengenbach, Denver.
Vice Chairman—Jay I. Durand, Seattle.
Secretary—E. C. Fleischner, San Francisco.
Executive Committee—T. C. McCleave, Oakland, Calif; J. P. Sedgwick, Minneapolis; Laurence R. DeBuys, New Orleans.
(Stenographer—Mr. Willard Bottome, New York)

Wednesday, June 11—2 p. m.

Meeting Place—St. Paul's Church, Chapel

1. Chairman's Address: Our Section in War Work. Franklin P. Gengenbach, Denver.
2. Report of the Advisory War Committee of the Children's Section. Julius P. Sedgwick, Minneapolis.
3. Results of Children's Year. Anna E. Rude, Washington, D. C.
4. The Work of the Pediatrist at Home. Frank C. Neff, Kansas City, Mo.
5. The Work of the Children's Bureau of the American Red Cross in Lyons, France. Clifford G. Grulee, Chicago.
6. The Artificial Feeding of Athreptic Infants. W. McKim Marriott, St. Louis.
7. The Deleterious Effect of Alkalinization of Infants' Food. Alfred F. Hess, New York.

Thursday, June 12—9 a. m.

Meeting Place—St. Paul's Church, Chapel

Election of Officers

8. Hemangio-Endotheliosarcoma of the Liver: A Disease of Early Life. John A. Foote, Washington, D. C.
9. Observations on the Spinal Fluid of Acute Disease. William W. Herrick, New York, and Arthur M. Dannenberg, Philadelphia.
10. Quantitative and Qualitative Changes in Cerebrospinal Fluid and Their Significance. Abraham Levinson, Chicago.
11. Pneumonia in Infancy and Childhood Without Physical Signs. Rowland G. Freeman, New York.
12. A Comparative Study of the Early and Late Secondary Complications of Influenzal Pneumonia in the Army and Those of Civil Pediatric Practice. Julius H. Hess, Chicago.
13. Abscess of the Lung in Children. Harry Wessler and Herman Schwartz, New York.
14. Some Practical Experiences in the Treatment of Children with Tuberculosis. R. Cole Newton, Montclair.

Friday, June 13—2 p. m.

Meeting Place—St. Paul's Church, Chapel

15. New Methods in Outpatient Work. Charles Hendee Smith, New York.
16. The Analysis of Human Milk: The Technic of Obtaining Samples and the Interpretation of Results. Fritz B. Talbot, Boston.
17. Retrospect of Fifteen Years' Experience in the Treatment of Hypertrophic Pyloric Obstruction in Infants. Langley Porter, San Francisco.
18. Chemical Examination of the Blood of Children. Henry D. Chapin, New York.
19. The Abuse of Cathartics and Laxatives in Infancy and Childhood. Louis Fischer, New York.
20. The Nervous Child and His Management. Edwin B. McCready, Pittsburgh.
21. A Study in a Foundling Institution to Determine the Existence of Congenital Lues. Laurence R. DeBuys, New Orleans.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

MEETS, WEDNESDAY AND THURSDAY, IN ST. PAUL'S CHURCH, LECTURE ROOM; *FRIDAY, IN ST. PAUL'S CHURCH, AUDITORIUM*

OFFICERS OF SECTION

Chairman—W. A. Bastedo, New York.
Vice Chairman—G. W. McCoy, Washington, D. C.
Secretary—Cary Eggleston, New York.
Executive Committee—J. F. Anderson, New Brunswick, N. J.; R. A. Hatcher, New York; Albion W. Hewlett, San Francisco; Arthur D. Hirschfelder, Minneapolis.

(Stenographer—Mr. Rexford L. Holmes, Washington, D. C.)

Wednesday, June 11—2 p. m.

Meeting Place—St. Paul's Church, Lecture Room

1. Chairman's Address: Suggestions for an Ideal Course in Therapeutics. Walter A. Bastedo, New York.
2. Therapeutic Aspect of Blood Transfusion. Lester J. Unger, New York.
3. Critical Period in Various Diseases Treated by Blood Transfusion. Edward Lindeman, New York.
4. The Action of Anthracene Cathartics on the Isolated Uterus. Charles C. Lieb, New York.
5. Therapeutic Observations in Bacillary Dysentery. P. Nolf, Brussels, Belgium. (By Invitation).
6. The Therapeutic Use of Active Deposit of Radium. Henry H. Janeway, New York.
7. A Study of Acute Bichlorid Intoxication in Normal and in Naturally Nephropathic Dogs. William deB. MacNider, Chapel Hill, N. C.

Thursday, June 12—9 a. m.

Meeting Place—St. Paul's Church, Lecture Room

Election of Officers

8. Forty Years' Observation Among Beer, Wine and Whisky Drinkers. Lambert Ott, Philadelphia.
9. Chronic Alcoholism: Dangers of Immediate Withdrawal. George E. Pettey, Memphis, Tenn.
10. A Contribution to the Pharmacology of the Local Anesthetics. Cary Eggleston and Robert A. Hatcher, New York.
11. The Principles of the Treatment of Asthma. Orville Harry Brown, Phoenix, Ariz.
12. Allergy in Drug Idiosyncrasy. Robert A. Cook, New York.
13. Results in the Modern Treatment of Diabetes. Henry Rawle Geyelin, New York.
14. A Therapeutic Study of Benzyl Benboate: Pharmacologic and Clinical. David I. Macht, Baltimore.

Friday, June 13—2 p. m.

Meeting Place—St. Paul's Church, Auditorium

JOINT MEETING OF SECTIONS ON PREVENTIVE MEDICINE AND PUBLIC HEALTH; PHARMACOLOGY AND THERAPEUTICS AND PATHOLOGY AND PHYSIOLOGY

SYMPOSIUM ON INFLUENZA

15. Experiments on Volunteers to Determine the Mode of Spread of Influenza. Milton J. Rosenau, Boston.
16. Epidemiology of Influenza. Wade H. Frost, Washington, D. C.
17. The Bacteriology of Influenza and Its Complications. William H. Park, New York.
18. The Pathology of Influenza. William G. MacCallum, Baltimore.
19. The Symptoms and Complications of Influenza. Lewis A. Conner, New York.
20. Further Studies on Prophylactic Inoculation in Influenza and Pneumonia. Edward C. Rosenow, Rochester, Minn.
21. Present Status of Prophylactic Vaccination Against Influenza. George W. McCoy, Washington, D. C.
22. Value of Convalescent Blood and Serum in the Treatment of Influenzal Pneumonia. Henry F. Stoll, Hartford, Conn.
23. The Treatment of Influenza by Means Other Than Vaccine and Serums. James B. Herrick, Chicago.

SECTION ON PATHOLOGY AND PHYSIOLOGY

MEETS, WEDNESDAY AND THURSDAY, IN ROYAL PALACE, HALL A; *FRIDAY, IN ST. PAUL'S CHURCH, AUDITORIUM*

OFFICERS OF SECTION

Chairman—Francis Carter Wood, New York.
Vice Chairman—Isabella C. Herb, Chicago.
Secretary—Josiah J. Moore, Chicago.
Executive Committee—F. P. Gay, Berkeley, Calif.; James Ewing, New York; Louis B. Wilson, Rochester, Minn.

(Stenographer—Mr. George B. Cock, Philadelphia)

Wednesday, June 11—2 p. m.

Meeting Place—Royal Palace, Hall A

1. Chairman's Address: The Relation of Pathology to Practice. Francis Carter Wood, New York.
2. The Human Machine in the Factory. Frederic Lee, New York.
3. Clinical Types of Occupational Diseases and the Study of Methods for their Prevention. Louis I. Harris, New York.
4. A Newly Recognized Cause of Pulmonary Disease—*Ascaris lumbricoides.* B. H. Ransom, Washington, D. C.
5. The Periodicity of Microfilaria. Kenneth M. Lynch, Charleston, S. C.
6. Experimental Emphysema. Sarah R. Kelman, Iowa City, Iowa.

Thursday, June 12—9 a. m.

Meeting Place—Royal Palace, Hall A

Election of Officers

7. Mustard Gas. Eli K. Marshall, Jr., Washington, D. C.
8. Mustard Gas: Its Penetration and Mode of Function in the Tissues. G. H. A. Clowes, Indianapolis.
9. The Physiology and Experimental Treatment of Acute Poisoning with the Lethal War Gases. Frank P. Underhill, New Haven, Conn.
10. Anatomic Changes in the Respiratory Tract Initiated by Irritating Gases. Milton C. Winternitz, New Haven, Conn.
11. Duodenectomy: A Preliminary Report. Frank C. Mann and K. Kawamura, Rochester, Minn.
12. Clinical Diagnosis as Compared with Necropsy Findings in Six Hundred Cases. Howard T. Karsner, L. Rothschild and E. C. Crump, Cleveland.

Friday, June 13—2 p. m.

Meeting Place—St. Paul's Church, Auditorium

JOINT MEETING WITH THE SECTIONS ON PHARMACOLOGY AND THERAPEUTICS, AND PREVENTIVE MEDICINE AND PUBLIC HEALTH

SYMPOSIUM ON INFLUENZA

For program see page 1418

SECTION ON STOMATOLOGY

MEETS IN ROYAL PALACE, HALL B—ALL MEETINGS

OFFICERS OF SECTION

Chairman—E. S. Talbot, Chicago.
Vice Chairman—Chalmers J. Lyons, Ann Arbor, Mich.
Secretary—Arthur D. Black, Chicago.
Executive Committee—Frederick B. Moorehead, Chicago; Arthur D. Black, Chicago; Frederick B. Noyes, Chicago.

(Stenographer—Mr. William F. Smart, New York)

Wednesday, June 11—9 a. m.

Meeting Place—Royal Palace, Hall B

1. Chairman's Address. Eugene S. Talbot, Chicago.
2. Macrocheilia, with Report of Two Cases. (Lantern Demonstration). F. B. Moorehead, Chicago.
3. Teaching the Principles of Maxillofacial Surgery in a Civilian School. Charles R. Turner, Philadelphia.
4. Teaching the Principles of Maxillofacial Surgery in a Military School. G. V. I. Brown, Milwaukee.
5. Experience of a Dental Surgeon in an Evacuation Hospital. Rae P. McGee, Denver.
6. Experience of a Dental Surgeon in a Base Hospital in the Advanced Area. Ivan Smith, Mishawaka, Ind.

Thursday, June 12—9 a. m.

Meeting Place—Royal Palace, Hall B

Election of Officers

7. Experience of a Dental Surgeon in a Base Hospital in a Base Section. Stewart Ruggles, Portsmouth, Ohio.
8. Experience of an Area Consultant in the Zone of the Advance. George W. Schaeffer, Columbus, Ohio.
9. Experience of an Area Consultant in a Base Section. Justin M. Waugh, Hood River, Ore.
10. Experience of an Area Consultant in the Intermediate Section. Herbert A. Potts, Chicago.
11. Observations on the Work at Queens Hospital in England. George M. Dorrance, Philadelphia.
12. Reconstruction Work in War Injuries of the Jaws (Lantern Demonstration). Robert H. Ivy, Milwaukee, and Joseph D. Eby, Washington, D. C.

Friday, June 13—9 a. m.

Meeting Place—Royal Palace, Hall B

13. Bone Grafting in Jaw Cases. Frank J. Tainter, St. Charles, Mo.
14. Infected Fractures of the Mandible. Daniel H. Macauly, Jr., and Ernest P. Dameron, Cape May, N. J.
15. Osteoperiosteal Bone Grafts of the Mandible as Performed by the French; A Report of Two Recent Cases. Henry S. Dunning, New York.
16. Prosthetic Appliances in Relation to the Surgical Treatment of Wounds of the Face and Jaws. V. H. Kazanjian, Boston.
17. Jaw Service at the American Red Cross Hospital No. 1, Paris. William Coughlin, St. Louis.

General discussion of Oral Surgery Service in the War will be opened by Vilray P. Blair, St. Louis.

SECTION ON NERVOUS AND MENTAL DISEASES

MEETS IN BRIGHTON CASINO—ALL MEETINGS

OFFICERS OF SECTION

Chairman—Archibald Church, Chicago.
Vice Chairman—E. E. Southard, Boston.
Secretary—Charles W. Hitchcock, Detroit.
Executive Committee—Francis X. Dercum, Philadelphia; Bernard Sachs, New York; C. Eugene Riggs, St. Paul.

(Stenographer—Miss Edith Phelps, New York)

Wednesday, June 11—2 p. m.

Meeting Place—Brighton, Casino

1. Chairman's Address: The Pathology of Cervical Ribs. Archibald Church, Chicago.
2. The Mechanism of Referred Pain, Hyperalgesia and Alcoholic Injections for the Relief of Neuralgia with Suggestions for the Surgical Treatment of Injured Nerves. Joseph Byrne, New York.
   Discussion to be opened by Alfred S. Taylor and Israel Strauss, New York.
3. Some Fundamental Traits of the So-Called Neurotic. Meyer Solomon, Chicago.
4. A New Polyglandular Compensatory Syndrome. Walter Timme, New York.
5. Treatment of War Neurosis. Theodore H. Weisenburg, Philadelphia.
6. The Psychopathology of Amnesia. Edward E. Mayer, Pittsburgh.
7. The Management of War Hysteria. Tom A. Williams, Washington, D. C.

Thursday, June 12—9 a. m.

Meeting Place—Brighton, Casino

Election of Officers

8. Neurologic and Psychiatric Experiences Illustrative of Real Progress and of Fads and Fallacies in Therapeutics. Charles K. Mills, Philadelphia.
9. The Range of the General Practitioner in Psychiatry. Elmer E. Southard, Boston.
10. Congenital Tumor (Telangiectasis) and Associated Cerebral Movements. William G. Spiller, Philadelphia.
11. Original Test for the Pathologic Great Toe Sign with Illustrative Cases. Leo M. Crafts, Minneapolis.
12. Clinical Report of a Case of Tumor of the Pons Varolii (Lantern Demonstration). Tom B. Throckmorton, Des Moines, Iowa.
13. The Histologic Changes in the Brain in Lethargic Encephalitis (Lantern Demonstration). Peter Bassoe and George B. Hassin, Chicago.
14. The Rôle of the Pituitary Gland in Epilepsy. Beverly Tucker, Richmond, Va.
    Discussion to be opened by Walter Timme, New York, and Lewellys F. Barker, Baltimore.

Friday, June 13—2 p. m.

Meeting Place—Brighton, Casino

15. Lethargic Encephalitis. Andrew C. Gillis, Baltimore.
16. A Case of Hysterical Hemiplegia, Following a Shrapnel Wound of Scalp, and Presenting Interesting Clinical Features. Harry H. Drysdale, Cleveland.

17. The Therapy of Neurosyphilis, *Judged by Arsenic Penetration of the Meninges.*
Henry G. Mehrtens, San Francisco.
18. Multiple Neuritis of Toxi-Infectious Origin with Especial Reference to Diabetic Polyneuritis.
Alfred Gordon, Philadelphia.
19. The Resemblance of the Sensory Symptoms of Diphtheritic Multiple Neuritis to Those of Anemic Cord Changes. George Wilson, Philadelphia.
20. Nervous System Sequelae in Three-Day Fever.
William H. Robey, Jr., Boston.

SECTION ON DERMATOLOGY

MEETS, WEDNESDAY AND FRIDAY, IN TRAYMORE, BELVIDERE; THURSDAY, IN SEASIDE

OFFICERS OF SECTION

Chairman—Otto H. Foerster, Milwaukee.
Vice Chairman—David Lieberthal, Chicago.
Secretary—Walter J. Highman, New York.
Executive Committee—Howard Morrow, San Francisco; Henry R. Varney, Detroit; Henry H. Hazen, Washington, D. C.
(Stenographer—Mrs. Irene Hilton Snyder, Chicago)

Wednesday, June 11—2 p. m.

Meeting Place—Traymore, Belvidere

1. *Chairman's Address: Dermatology and Associated Disorders of the Mucous Membranes.*
Otto H. Foerster, Milwaukee.

SYMPOSIUM ON DERMATOLOGY AND SYPHILOLOGY DURING THE WAR

2. Dermatology and Syphilology in a Medical Advisory Board. Henry H. Hazen, Washington, D. C.
3. Dermatology and Syphilology in the Army.
Warren Walker, Philadelphia.
4. Experiences with Scabies at a Debarkation Port.
C. Guy Lane, Woburn, Mass.
5. Responsibilities in the Treatment of Syphilis.
Harry G. Irvine, Minneapolis.
6. A State Campaign Against Venereal Diseases.
Harold N. Cole, Cleveland.

Thursday, June 12—9 a. m.

Meeting Place—Seaside

Election of Officers

SYMPOSIUM ON SYPHILOLOGY

7. Further Work with Arsphenamin.
Jay F. Schamberg, John A. Kolmer and G. W. Raiziss, Philadelphia.
8. Vitiligo and Syphilis.
John E. Lane, New Haven, Conn.
9. Observations on the Treatment of Syphilis.
William H. Guy, Pittsburgh.
10. Syphilitic Epididymitis.
Henry E. Michelson, Minneapolis.
11. Two Years of Radium.
Howard Morrow, San Francisco.
12. Roentgen-Ray Treatment of Widespread and Generalized Skin Diseases. Fred Wise, New York.
13. Treatment of Nevus Vasculosis and Other Skin Defects by the Electrodesiccation Method, Ultraviolet Rays, Radium and Electrolysis.
William L. Clark, Philadelphia.

Friday, June 13—2 p. m.

Meeting Place—Traymore, Belvidere

14. Ragweed Dermatitis.
Richard L. Sutton, Kansas City, Mo.
15. Importance of Normal Amount of Oil in the Skin.
Henry R. Varney, Detroit.
16. The *Moulage* as a Record Employed at the Army Medical Museum. J. Frank Wallis, Pleasantville, N. J.
17. Blood Sugar Findings in Diseases of the Skin.
Isaac R. Pels, Baltimore.
18. The Etiology of Common Warts.
Udo J. Wile and Lyle Kingery, Ann Arbor, Mich.
19. Dermatothlasia. George M. MacKee, New York.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

MEETS, WEDNESDAY AND THURSDAY, IN BREAKERS, EGYPTIAN ROOM; FRIDAY IN ST. PAUL'S CHURCH, AUDITORIUM

OFFICERS OF SECTION

Chairman—C. St. Clair Drake, Springfield, Ill.
Vice Chairman—J. W. [illegible] D. C.
Secretary—Don B. Lowe, Akron, Ohio.
Executive Committee—William C. Rucker, Washington, D. C.; Otto P. Geier, Cincinnati; W. S. Rankin, Raleigh, N. C.
(Stenographer—Mr. Samuel Bruckheimer, New York)

Wednesday, June 11—9 a. m.

Meeting Place—Breakers, Egyptian Room

1. The Influence of the War on Preventive Medicine and Public Health. C. St. Clair Drake, Springfield, Ill.
2. *Public Health* Problems of the Southern Countries.
Juan Guiteras, Havana, Cuba.
3. The Ohio Plan of County Health Control.
Allen W. Freeman, Columbus, Ohio.
4. What New Jersey Has Done in Mosquito Extermination.
William E. Darnall, Atlantic City, N. J.
5. Recent and Pending National Legislation Affecting Public Health Control.
Leslie L. Lumsden, Washington, D. C.
6. The Demand *During the Reconstruction* Period for a Community Nursing Service.
Bertis R. Wakeman, Hornell, N. Y.

Thursday, June 12—9 a. m.

Meeting Place—Breakers, Egyptian Room

Election of Officers

7. General Health Activities and Their Influence on Tuberculosis Mortality.
George Thomas Palmer, Springfield, Ill.
8. The Aftermath of Influenza.
Franklin C. Gram, Buffalo.
9. Some Practical Statistics of Influenza Morbidity and Mortality. Frederick L. Hoffman, Newark, N. J.
10. Progress of Venereal Disease Control.
C. C. Pierce, Washington, D. C.
11. Encephalitis Lethargica. Josephine B. Neal, New York.
12. Open Air Classes. Leopold Marcus, New York.

Friday, June 13—2 p. m.

Meeting Place—St. Paul's Church, Auditorium

JOINT MEETING OF SECTIONS ON PREVENTIVE MEDICINE AND PUBLIC HEALTH; PHARMACOLOGY AND THERAPEUTICS, AND PATHOLOGY AND PHYSIOLOGY

SYMPOSIUM ON INFLUENZA

For program see page 1418

SECTION ON GENITO-URINARY DISEASES

MEETS, WEDNESDAY AND FRIDAY, IN BRIGHTON, CASINO; THURSDAY, IN ALAMAC

OFFICERS OF SECTION

Chairman, W. F. Braasch, Rochester, Minn.
Vice Chairman, R. L. Rigdon, San Francisco.
Secretary—E. O. Smith, Cincinnati.
Executive Committee—Louis E. Schmidt, *Chicago;* Hugh Cabot, Boston; Edward L. Keyes, Jr., New York.
(Stenographer—Mr. George D. Ziegler, New Brunswick, N. J.)

Wednesday, June 11—9 a. m.

Meeting Place—Brighton, Casino

1. The Colliculus Seminalis at Birth: With a Report of the Origin, Development, and Zonal Distribution of Its Gland Tubules. Ernest M. Watson, Buffalo. Discussion to be opened by Anton G. Rytina, Baltimore.
2. Recent *Considerations* Concerning the Seminal Vesicles with Special References to Differential Diagnosis and Treatment. Edward W. White, Chicago. Discussion to be opened by Louis E. Schmidt, Chicago.
3. Further Observations On the Use of Indigo-Carmin as a Test of Renal Function.
H. Dawson Furniss, New York.
Discussion to be opened by Benjamin A. Thomas, Philadelphia, and Leo Buerger, New York.

4. Relief of Essential Hematuria by Intrapelvic Injections of Silver Nitrate. Anton G. Rytina, Baltimore.
   Discussion to be opened by Herman L. Kretschmer, Chicago.
5. Urethral Strictures: Their Nonoperative Treatment for the General Practitioner. Wirt B. Dakin, Los Angeles.
   Discussion to be opened by William N. Wishard, Indianapolis.
6. Malakoplakia of the Bladder: Reports of Two Cases. Alfred I. Folsom, Dallas, Texas.
   Discussion to be opened by Arthur L. Chute, Boston.
7. Etiology of Vesical Diverticulum. Frank Hinman, San Francisco.
   Discussion to be opened by Charles M. McKenna, Chicago.
8. Contracture of the Neck of the Bladder: Its Pathology and Operative Treatment. Leo Buerger, New York.
   Discussion to be opened by Hugh H. Young, Baltimore, and William C. Quinby, Boston.

Thursday, June 12—9 a. m.

Election of Officers

Meeting Place—Alamac

9. Chairman's Address: Ureteral Dilatation. William F. Braasch, Rochester, Minn.
   Discussion to be opened by Guy L. Hunner, Baltimore.
10. Urologic Findings in Diseases of the Central Nervous System. John R. Caulk, Harry G. Greditzer and Francis M. Barnes, Jr., St. Louis.
11. Report on Shell Fractures of Spine, Studied at Walter Reed General Hospital with Observations on Changes in Kidney and Bladder Function. Harry W. Plaggemeyer, Detroit.
    Discussion to be opened by Edward L. Keyes, New York; John T. Geraghty, Baltimore, and Irving S. Koll, Chicago.
12. Ureteral Transplantation in Inoperable Conditions of the Bladder. William E. Lower, Cleveland.
    Discussion to be opened by Edwin Beer, New York.
13. Hematogenous Infections of the Kidney. William J. Mayo, Rochester, Minn.
    Discussion to be opened by Hugh H. Young, Baltimore.
14. Clinical Observations in the Treatment of Nephrolithiasis. Albert J. Ochsner, Chicago.
    Discussion to be opened by H. G. Bugbee, New York.
15. Department of Urology, American Expeditionary Forces. Hugh H. Young, Baltimore.
    Discussion to be opened by Hugh Cabot, Boston.

Friday, June 13—9 a. m.

Meeting Place—Brighton, Casino

16. Some Problems in Urology in the United States Navy. (Lantern Demonstration.) Oswald S. Lowsley, New York.
17. The Army School of Urology. Gideon Timberlake, Baltimore.
18. The Civilian Venereal Disease Dispensary as a War Measure. (Being a report of the work done at the Illinois Social Hygiene League Dispensary, during and since the war). Budd C. Corbus, Chicago.
    Discussion to be opened by Francis R. Hagner, Washington, D. C.; William L. Baum, Chicago, and Harry E. Kleinschmidt, Washington, D. C.
19. The Early Diagnosis and a Comparative Standardization of the Treatment of Syphilis. Elmore B. Tauber, Cincinnati.
    Discussion to be opened by Abraham L. Wolbarsh, New York.
20. Some Urologic Aspects of Dermoid Cysts. William C. Quimby, Boston.
21. The Frequency and Significance of Granular Urethritis. Noah E. Aronstam, Detroit.
    Discussion to be opened by Frederick W. Robbins, Detroit.

21. Congenital Peno-Rectal Fistula. Simon Englander, Cleveland.

SECTION ON ORTHOPEDIC SURGERY

MEETS IN CHALFONTE, ROOM 17—ALL MEETINGS

OFFICERS OF SECTION

Chairman—Emil S. Geist, Minneapolis.
Vice Chairman—Benjamin P. Farrell, New York.
Secretary—Henry B. Thomas, Chicago.
Executive Committee—Russell A. Hibbs, New York; Edwin W. Ryerson, Chicago; Albert H. Freiberg, Cincinnati.
(Stenographer—Miss Lulu Gay, Philadelphia)

Wednesday, June 11—9 a. m.

Meeting Place—Chalfonte, Room 17

1. Intramedullary Beef-Bone Splints in Fractures of Long Bones: New Technic of Application. (Lantern Demonstration). Edwin W. Ryerson, Chicago.
   Discussion to be opened by Ralph R. Fitch, Rochester, N. Y., and Frank E. Peckham, Providence, R. I.
2. Osteomyelitis (Lantern Demonstration). James W. Sever, Boston.
   Opening discussion by Pedro Chutro, Buenos Aires, Albert H. Freiberg, Cincinnati; Robert B. Osgood, Boston, and William S. Baer, Baltimore.
3. Surgical Treatment and After-Care of Old Unreduced Pott's Fractures (Lantern Demonstration). William L. Sneed, New York.
   Discussion to be opened by George W. Hawley, Bridgeport, Conn.; Frederick J. Cotton, Boston, and Zabdiel B. Adams, Boston.
4. The Reconstruction of a Loss of Substance of the Humerus Following Shell Injury to Upper Arm: Report of Case. Charles L. Scudder, Boston.
5. Place of Special Work in the Army During the Emergency. Elliott G. Brackett, Boston.
   Discussion to be opened by Sir Gen. Robert Jones, Liverpool, England.
6. Secondary Treatment of War Amputés. Carl C. Yount, New York.
   Discussion to be opened by Sir Gen. Robert Jones, Liverpool, England.
7. Amputation Stumps in Relation to the Fitting of Artificial Limbs. E. J. Rose, Gallipolis, Ohio.
   Discussion to be opened by David Silver, Washington, D. C.; Philip D. Wilson, Columbus, Ohio; W. S. Baer, Baltimore, and John S. Davis, Dallas, Texas.

Thursday, June 12—9 a. m.

Meeting Place—Chalfonte, Room 17

Election of Officers

8. Improvised Orthopedic Exercising Apparatus. Rudolph S. Reich, Cleveland.
   Discussion to be opened by W. G. Stern, Cleveland.
9. The Foot Problem in the Army. William C. Peters, Bangor, Me.
   Discussion to be opened by E. W. Ryerson, Chicago.
10. An Operation for Claw Foot (Lantern Demonstration). Russell A. Hibbs, New York.
    Discussion to be opened by Fred J. Fassett, Seattle, Benjamin P. Farrell, New York, and Michael Hoke, Atlanta, Ga.
11. Chairman's Address: Some of the Things that Orthopedic Surgery has Done for the War and that the War has Done for Orthopedic Surgery. Emil S. Geist, Minneapolis.
12. Early Functional Results After Secondary Suture. Base Hospital No. 9, France (Lantern Demonstration). George W. Hawley, New York.
    Discussion to be opened by Col. H. W. Gray, London, England, and William W. Plummer, Buffalo.
13. Precombat Orthopedic Work in the United States. James T. Rugh, Philadelphia.
    Discussion to be opened by Emil S. Geist, Minneapolis, and Brainerd H. Whitbeck, New York.
14. Precombat Orthopedic Work Overseas. Henry P. Mauck, Baltimore.
    Discussion by Z. B. Adams, Boston; Robert J. Graves, Concord, N. H., and Eben W. Fiske, Boston.
15. The Standardized Splints and Methods of Treatment in Bone and Joint Injury, A. E. F. Joel E. Goldthwait, Boston.
    Discussion to be opened by Sir Gen. Robert Jones, Liverpool, England; William W. Plummer, Buffalo, and Wallace Cole, St. Paul.

Friday, June 13—9 a. m.

Meeting Place—Chalfonte, Room 17

16. The Orthopedic Surgeon and Industrial Accidents.
LEO B. MEYER, New York.
Discussion to be opened by JOHN C. A. GERSTER, New York, and STERLING BUNNELL, San Francisco.

17. The Curative Work Shop. JAMES C. GRAVES, JR.
Discussion to be opened by ELLIOTT G. BRACKETT, Boston; ZABDIEL B. ADAMS, Boston, and NATHANIEL ALLISON, St. Louis.

racture of the Neck of the Femur: An Analysis of One Hundred Cases. WILLIS C. CAMPBELL, Memphis, Tenn.
Discussion to be opened by ELLIOTT G. BRACKETT, Washington, D. C.

9. Ununited Fractures of the Hip.
MELVIN S. HENDERSON, Rochester, Minn.
Discussion to be opened by ELLIS W. JONES, Los Angeles, and WALLACE BLANCHARD, Chicago.
Discussion to be opened by ARTHUR J. GILLETTE, St. Paul, and JOHN S. DAVIS, Dallas, Texas.

20. Indications for Surgical Intervention in Peripheral Nerve Injuries (Lantern Demonstration).
KARL W. NEY, New Orleans.
Discussion to be opened by COL. H. M. GRAY, London, England; EMILE ALTMAN, New York; SAMUEL C. BALDWIN, Salt Lake City, and HARRY A. HALGREN, Watertown, Wis.

21. Operative Treatment of Peripheral Nerve Injuries.
CHARLES A. ELSBERG, New York.
Discussion to be opened by PEDRO CHUTRO, Embarkation Hospital No. 4; Frederick C. KIDNER, Detroit, and SAMUEL W. BOORSTEIN, New York.

22. Postoperative Treatment of Peripheral Nerve Injuries.
MURRAY S. DANFORTH, Providence, R. I.
Discussion to be opened by CHARLES H. FRAZIER, Philadelphia; PAUL F. STOOKEY, Lamont, Iowa; J. FRANK CORBETT, Minneapolis; WILLIAM W. PLUMMER, Buffalo, and DEAN D. LEWIS, Chicago.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

MEETS IN CHALFONTE, ROOM 16—ALL MEETINGS

OFFICERS OF SECTION

Chairman—WILLIAM M. BEACH, Pittsburgh.
Vice Chairman—FRANK SMITHIES, Chicago.
Secretary—HORACE W. SOPER, St. Louis.
Executive Committee—CHARLES G. STOCKTON, Buffalo; DWIGHT H. MURRAY, Syracuse, N. Y.; ANTHONY BASSLER, New York.

(Stenographer—Mr. JEROME VICTORY, Jersey City, N. J.)

Wednesday, June 11—9 a. m.

Meeting Place—Chalfonte, Room 16

1. Chairman's Address: Spirit of the Physician in War and Peace. WILLIAM M. BEACH, Pittsburgh.

2. Constipation: A New Definition, the Primary Causes and Its Hygienic Treatment.
DWIGHT H. MURRAY, Syracuse, N. Y.
Discussion to be opened by WILLIAM H. AXTELL, Bellingham, Wash.; ROLLA CAMDEN, Parkersburgh, W. Va.; J. M. FRICK, Toledo, Ohio, and V. LEE FITZGERALD, Providence, R. I.

3. Sphincter Inhibition as a Cause of Constipation and Other Gastro-Intestinal Disturbances.
JEROME M. LYNCH, New York.
Discussion to be opened by JOSEPH C. BLOODGOOD, Baltimore; J. COLES BRICK, Philadelphia; RALPH W. JACKSON, Fall River, Mass., and JAMES A. MACMILLAN, Detroit.

4. Proctology in a War Hospital.
LOUIS J. HIRSCHMAN, Detroit.
Discussion to be opened by GRANVILLE S. HANES, Louisville, Ky.; ALOIS B. GRAHAM, Indianapolis; D. C. MCKENNEY, Buffalo, and ARTHUR HEBB, Baltimore.

5. Late Syphilis Within the Rectum.
CHARLES J. DRUECK, Chicago.
Discussion to be opened by JOHN L. JELKS, Memphis,
H. Los Angeles; G. M. LINTHICUM,
H. STAUFFER, St. Louis.

6. Stricture of the Rectum. FRANK C. YEOMANS, New York.
Discussion to be opened by HOLLAND H. DONALDSON, Pittsburgh; CHARLES S. GILMAN, Boston; ROBERT T. MORRIS, New York, and J. RAWSON PENNINGTON, Chicago.

7. Examination of the Patient.
J. RAWSON PENNINGTON, Chicago.
Discussion to be opened by LEWIS H. ADLER, JR., Philadelphia; GEORGE B. EVANS, Dayton, Ohio; DONLEY C. HAWLEY, Burlington, Vt.; JAMES A. MCVEIGH, Detroit, and LOUIS J. KROUSE, Cincinnati.

Thursday, June 12—9 a. m.

Meeting Place—Chalfonte, Room 16

Election of Officers

8. Gastric Cell Primary Atrophy.
ANTHONY BASSLER, New York.
Discussion to be opened by MAX EINHORN, New York, and FRANK SMITHIES, Chicago.

9. Further Observations on the Gastro-Intestinal Disturbances Met with in Pernicious Anemia.
JULIUS FRIEDENWALD and THEODORE H. MORRISON, Baltimore.
Discussion to be opened by ARTHUR F. CHACE, New York, and MARTIN E. REHFUSS, Philadelphia.

10. The Metabolic Gradient Underlying Peristalsis.
WALTER C. ALVAREZ, San Francisco.
Discussion to be opened by JACOB KAUFFMANN, New York, and WALTER B. CANNON, Boston.

11. The Late Results of Supposedly Successful Operations on the Digestive Tract.
THOMAS R. BROWN, Baltimore.
Discussion to be opened by JOHN A. LICHTY, Pittsburgh, and WILLY MEYER, New York.

12. Certain Limitations of Roentgen-Ray Diagnosis of Gastro-Intestinal Diseases. DUDLEY ROBERTS, Brooklyn.
Discussion to be opened by GEORGE E. PFAHLER, Philadelphia, and JAMES T. CASE, Battle Creek, Mich.

13. The Operability of Cancer of the Stomach as Determined by the Roentgen Ray.
RUSSELL D. CARMAN, Rochester, Minn.
Discussion to be opened by R. WALTER MILLS, St. Louis, and LEWIS GREGORY COLE, New York.

Friday, June 13—9 a. m.

Meeting Place—Chalfonte, Room 16

14. Further Experiences with the String Test.
MAX EINHORN, New York.
Discussion to be opened by WILLIAM GERRY MORGAN, Washington, D. C., and ALLEN A. JONES, Buffalo.

15. The Importance of Detecting the Encysted Forms of the Parasitic Protozoa in the Feces.
SIDNEY K. SIMON, New Orleans.
Discussion to be opened by ALBERT BERNHEIM, Philadelphia.

16. The Prevalence of Amoeba, *Cercomonas Intestinalis Hominis*, and Pellagrous Infection in the South. The Responsibility for Which Rests on Nation and State. Suggestions as to Means of Control.
JOHN J. JELKS, Memphis, Tenn.
Discussion to be opened by JAMES C. JOHNSON, Atlanta, Ga.; SIDNEY K. SIMON, New Orleans.

17. Common Bile Duct Obstruction: Its Incidence and Clinical Recognition. FRANK SMITHIES, Chicago.
Discussion to be opened by DAVID RIESMAN, Philadelphia, and JOHN M. T. FINNEY, Baltimore.

18. Influence of Endocrine Functioning on Gastric-Intestinal Conditions. CLEMENT R. JONES, Pittsburgh.
Discussion to be opened by GEDIDE A. FRIEDMAN, New York, and JOHN C. HEMMETER, Baltimore.

19. Progress in Gastro-Enterology During the World War.
SEALE HARRIS, Birmingham, Ala.
Discussion to be opened by LOUIS M. GOMPERTZ, New Haven, Conn., and GEORGE B. EUSTERMAN, Rochester, Minn.

20. The Gastric Hypermotility Associated with Diseases of the Gallbladder, Duodenum and Appendix: A Clinical and Experimental Study.
GEORGE DAVID STEWART and WILLIAM HOWARD BARBER, New York.
Discussion to be opened by ANTHONY BASSLER, New York, and R. WALTER MILLS, St. Louis.

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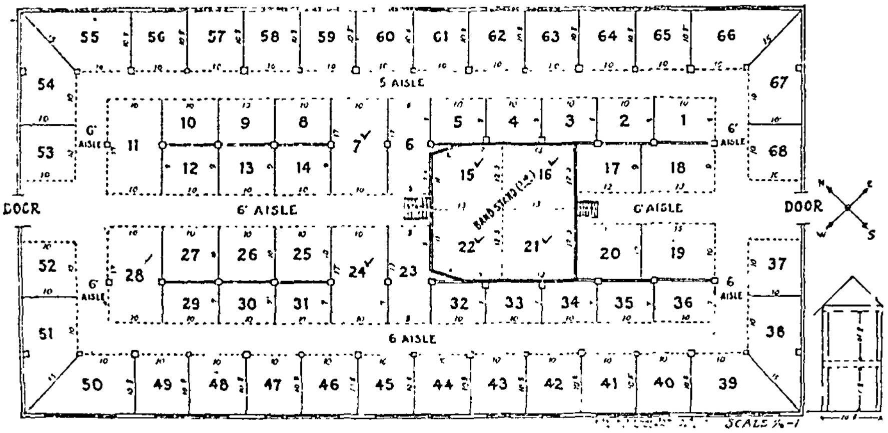
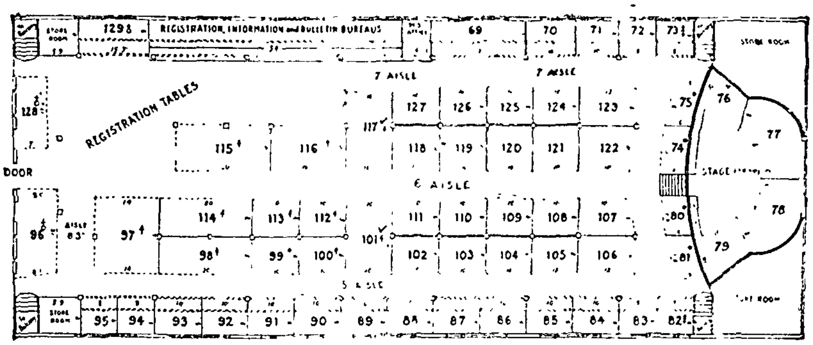
ATTRACTIONS AT THE EXHIBITION

The successful practice of medicine and surgery today depends on many different factors. Not the least of these is the service rendered by the manufacturers of medical and surgical supplies. What science conceives, these men execute. Like the faithful attendant in the operating room, they place in the physicians' hands those instruments, pharmaceuticals, appliances, supplies, textbooks, etc., needed in doing good, conscientious work and in following the latest technic in the treatment of disease.

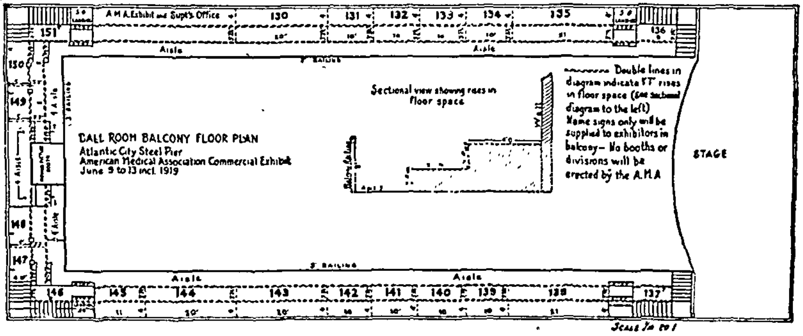
At the Commercial Exhibit this year one may see at their best the fruits of the medical and surgical manufacturing industry. The military hospital has



FLOOR PLAN OF ARCADE.



FLOOR PLAN OF BALL ROOM.


A M A Exhibit and Supt's Office
Aisle
Aisle
Sectional view showing rises in floor space
Wall
STAGE
Scale 1/8 to 1

BALL ROOM BALCONY FLOOR PLAN
Atlantic City Steel Pier
American Medical Association Commercial Exhibit
June 9 to 13 incl. 1919

Double lines in diagram indicate 1' rises in floor space (see sectional diagram to the left)
Name signs only will be supplied to exhibitors in balcony – No booths or divisions will be erected by the A.M.A

FLOOR PLAN OF BALL ROOM BALCONY.

acted as a crucible out of which has come much that is new and better in diagnosis, treatment and surgery. The latter, in turn, have been responsible for the development of new appliances, new instruments, new remedies, new literature, etc. The bringing together into one unified exposition of more than a hundred exhibitors gives the physician a wonderful opportunity to see at first hand many of these new improvements as well as the best in those standard supplies which he uses every day.

Although a great deal of care will be taken to make the different exhibits pleasing and attractive to the eye, it should be remembered that they will be far more than mere lifeless displays. Here at the various booths will be found skilled technicians, competent demonstrators and well-informed attendants, able to answer questions or give special information on their respective subjects. Many of these men are experts or authorities in their special fields and the doctor who does not take full advantage of their prescence will miss one of the stimulating features of the annual meeting.

The floor plans shown, the index of exhibitors and the brief descriptions of exhibits on the following pages are given as an aid toward visualizing what the Victory Meeting Exposition will have to offer in the way of interest, instruction and stimulus to better practice.

Do not visit the exhibit hurriedly, or try in one hasty trip round the hall to assimilate all of the valuable and practical information that is to be obtained. Take sufficient time to go from booth to booth, making a close and studied inspection of the innovations and improvements in the accessories to medical practice which the exhibitors are placing before you at considerable trouble and expense. The exhibition will formally open at noon Monday, June 9—it will be open from 8 a. m. to 6 p. m. each day—and will close Friday noon, June 13.

While these advance notices offer a representative "preview" of the exhibition, still, many firms failed to supply advance information on their proposed displays; consequently it is left to the visitor to make a thorough tour of the Arcade, the Ball Room, and the Ball Room Balcony, to see everything that is there assembled for his benefit and information. See the exhibits and talk to the exhibitors freely, without feeling that you are expected to buy.

Dr. I. E. Leonard, *Local Chairman*
2842 Atlantic Avenue
Atlantic City, N. J.

Will C. Braun, *Supt. of Exhibits*
A. M. A., 535 N. Dearborn Street
Chicago

ANESTHESIA APPARATUS

The various exhibits and demonstrations of Anesthesia Apparatus will furnish an unusual opportunity to inspect the newest and best methods in this field. Machines for hospital, office and bedside use will be shown.

—The Foregger Co., Space 121, will show a new hospital apparatus for gas-oxygen-ether vapor anesthesia on the "Gwathmey Sight Feed" style. The story of the creation of this new model may be of interest. Shortly after this country entered into the war the Foregger Co. built upon design of Dr. Chas. H. Gallagher of Ithaca, a special Army Model on the Gwathmey principle but with some new features and particularly constructed for rough handling in the war zone. Dr. Gallagher ended his career in France.

—The Scientific Apparatus Co., New York, at Space 103, will interest you in up-to-the-minute anesthesia apparatus. They will have very interesting machines to show you. Here, also, may be seen demonstrated the Anaesthetometer—an automatic ether administrator, together with the Connell Suction Insufflation Apparatus for nose and throat work.

—C. M. Sorensen Co., Inc., New York, Space 118, will demonstrate the Sorensen Tankless Air Compressor, showing both the portable and office type apparatus, used in nose and throat work for spraying, nebulizing and suction. They will also give demonstrations of the Yankhauer Tonsillotomy Outfit; also making a special show of the Dr. Bronower's Vacuum-Ether Apparatus for suction and insufflation anesthesia. There will also be an exhibit of the Dr. L. H. Coffin Apparatus, as well as the Sorensen Sinus Vacuum Cleanser.

—Toledo Technical Appliance Co., Toledo, Space 43, will exhibit the McKesson Anesthetic Appliances, confining their exhibit to three models for hospital, office and home or portable use, embodying in each the well known intermittent flow features, which regulate the administration of the gases automatically, through the action of the respiration. Each model is designed directly to meet the requirements sought, whether in hospital work, office work, or for minor operations and obstetrics in the home.

BOOKS

The past year has been very prolific in medical literature, especially works on surgery and reconstruction occasioned by the extensive work performed in the European war zone and military hospitals. Much of it has been of a high order. With practically every one of the better publishers represented in the exhibits, the physician can in a remarkably short time get in touch with the newest works and judge for himself as to their usefulness in his own work.

—P. Blakiston's Son & Co., Philadelphia, Space 116, announce that Davis' Plastic Surgery will be ready for the meeting in June. Dr. John Staige Davis of Johns Hopkins (Captain, M. C., U. S. Army) has had especial opportunity to study and investigate in this field and has written a book of unusual interest and value. Among other important works to be exhibited, are Gould and Pyle, "Medicine and Surgery," new edition, thoroughly revised, enlarged, and made even more useful than before as a practical book of ready reference; a new edition of Sequeira Diseases of the Skin; and many other of their recent practical works.

—F. A. Davis Co., Philadelphia, Space 19, will show a number of interesting new books, including Dr. Arnold Sturmdorf's "Gynoplastic Technology," illustrated with many handsomely colored plates. The recently completed DaCosta "Handbook of Medical Treatment," in two volumes, will also be in evidence. Also the new (4th) edition of Bassler's "Diseases of the Stomach," Scripture and Jackson "On Correction of Speech Disorders," and Hess' new book, "Principles and Practice of Infant Feeding."

—J. B. Lippincott Co., Philadelphia, Spaces 66 and 67, will exhibit their large line of medical, pharmaceutical, nursing textbooks and works of reference. The series of enlarged anatomical studies from Piersol's "Human Anatomy" will be a special feature. Among other new publications there will be Hirst's "Atlas of Operative Gynecology" with 210 large illustrations nearly all in color, showing the separate steps of each operative procedure; Fuch's "Textbook of Ophthalmology," fifth edition.

—The Macmillan Co., New York, Space 92, will exhibit among their authoritative medical works the new *Journal of Industrial Hygiene*, an international monthly magazine, of particular importance in this time of industrial unrest, which ought to interest government as well as medical and industrial authorities.

—The C. V. Mosby Co., St. Louis, Space 117, will show their line of standard and new medical, surgical, dental and nursing publications. Among the new works shown will be: Wall's Sex Worship, Leavitt's Operations of Obstetrics, Hertzler's Peritoneum (2 vols.), Pottenger's Symptoms of Visceral Disease, MacLeod's Physiology and Biochemistry, Levinson's Cerebrospinal Fluid, etc.

—Thomas Nelson & Bros., New York, Space 124, will interest you in the Nelson Loose-Leaf Medicine in Six Volumes. Call at this booth and learn more about this practical system of accumulating and preserving good medical literature.

—The Oxford University Press, New York, will exhibit at Space 120. The Oxford Press is 451 years old and is able to produce a list of its publications for 334 years. Since the A. M. A. Exposition is educational, this Press has decided to make some historical exhibits in connection with early printing at Oxford and some specially interesting material in regard to early medical publishing. This exhibit will include all of the Oxford Medical Publications, among which are to be noted the already famous Oxford Loose-Leaf Medicine and Surgery, the Oxford Medical Belles-Lettres, over thirty new Medical Monographs and a complete exhibit of over 225 titles.

—Rebman Co., New York, Space 53, will show a new reprint of Toldt's "Atlas of Human Anatomy." An increased use of the visual or graphic method, both in the acquirement and in the revivification of knowledge, is a feature of the age in all educational departments, and it will be demonstrated that Toldt's "Atlas of Human Anatomy" is an adequate application of the method to the study of human anatomy

—W. B. Saunders Co., Philadelphia, Space 97, will exhibit aside from the new editions of many of their standard publications, a new work on surgery, Warbasse's Surgical Treatment, the current issue of the Medical Clinics of North America, and of the Surgical Clinics of Chicago, Ewing's Neoplastic Diseases, the New Mayo Clinic Volume, Koll's Diseases of the Male Urethra, Smith's Genito-Urinary Surgery, Hirst's (J. C.) Obstetrics and his Gynecology, Griffith's Pediatrics, Rivas' Human Parasitology, McJunkin's Clinical Microscopy and Chemistry, Heineman on Milk, Sayre and Havenhill's Pharmacy, Friedenwald and Ruhräh's Diet, Overton and Denno's, The Health Officer, and several books of special value in reconstruction and rehabilitation.

—Wm. Wood & Co., New York, Space 123, invite visiting physicians to inspect their unusually attractive selection of Medical and Surgical books. This firm endeavors consistently to publish only works of real scientific value. All branches are here represented and each title is well worth looking into. Visitors will be cordially welcomed.

—The Year Book Publishers, Chicago, Space 70, will exhibit the Practical Medicine Series in eight volumes, devoted to contemporary medical and surgical progress. In its eighteen years of publication this series has become popular with the profession, meeting alike the requirements of the general practitioner and those of the specialist. The exhibit will include 1919 and previous issues.

FOODS AND BEVERAGES

More and more are we coming to depend on the science of dietetics in medical practice. Among the exhibitors will be a number of firms that are supplying scientifically prepared food products that fill special needs in the practice of medicine. Information regarding such products is an asset to any physician.

—Borcherdt Malt Extract Co., Chicago, Space 106, will exhibit Borcherdt's Malt Soup-Extract and Borcherdt's Sugar, two distinctively Borcherdt products. They will show their original Malt Soup, also Malt Sugar in crystalline form.

—The Dennos Products Co., Chicago, Space 72, will again hand out their attractive and well known prescription pencil. Dennos Food itself will be the principal feature of this exhibit, and their Pennsylvania and Ohio representative will be in charge.

—The Dry Milk Co., New York, Space 32, will show their Honor Brand Dry Milk for the first time at a Convention. They will distribute literature and supply information as to the use of Dry Milk for infants and invalids. Dry Milk has become quite a factor, and conventionists will have an opportunity to learn about its manufacture and use. Demonstration as to the condition of the curd when precipitated as compared with the curd of liquid milk will also be given. They will also show their Sterling Milk Sugar.

—The Horlick's Malted Milk Co., Racine, Wis., Space 96, will have representatives in attendance at their booth to distribute samples and furnish information regarding Horlick's Malted Milk. The value of Horlick's Malted Milk as a light, digestible, and nutritious food will be demonstrated to visitors.

—Mead, Johnson & Co., Evansville, Ind., Space 122. One of the special features of the Dextri-Maltose exhibit will be the performance of tests showing the effect of potassium and sodium salts on curd formation in milk and how this action is responsible for the production of three forms of Mead's Dextri-Maltose—one containing sodium, another containing potassium and the third being salt-free.

—The Kaffee Hag Corporation, New York, Spaces 107 and 108, will have an interesting exhibit of KAFFEE HAG. Coffee in all of its stages, from the blossom to the caffein-free article will be shown. Representatives will be on hand to welcome the visiting physicians and to tell any physician about KAFFEE HAG who is not already familiar with this well known brand of caffein-free coffee.

—Kumyss, Inc., New York, Spaces 149 and 150, will demonstrate Dr. Brush's Kumyss, "Sparkling Milk"—known for forty years as a fermented milk—digested and assimilated readily, even by the most delicate stomach. A food indicated in diabetes and nephritis; in gastric and intestinal disturbances, etc.

—Mellin's Food Co., Boston, Spaces 119 and 126, will interest you in infant feeding, a subject of serious import to physicians. In recognition of the fact that one of the important features of the Commercial Exhibit of the American Medical Association is to give physicians an opportunity to obtain information relative to products of particular usefulness to them, representatives of this company will be pleased to answer all inquiries regarding Mellin's Food and its application as a modifier of milk and to offer some suggestions that may be helpful toward a better management of an infant's diet.

—The Welch Grape Juice Co., Space 78. In this, their Fiftieth Year of National Service, Welch's Grape Juice is more generally presented than ever before. Don't forget to try Grapelade, the pure grape spread so well liked by the A. E. F. and now offered on the domestic market. It's really delicious. It will be served at their booth.

INSTRUMENTS, APPARATUS AND FURNITURE

Many new types of equipment will be on exhibition this year. A visit to these exhibits will give many valuable ideas as to new methods, new technic, etc. Here the physician cannot only see these new devices but also have their uses and advantages clearly demonstrated by skilled technical men.

—W. D. Allison Co., at Space 76, will exhibit office furniture consisting of modern appliances for physicians' private offices. They will also show their specialist's chairs, cabinets, stools, waste receptacles, extension light brackets, extension curtain brackets; the Craftsman Chair used by the specialist and the general practitioner; their examining tables, instrument and medicine cabinets, chairs, stools and various articles of interest to the profession. They will feature an irrigating table with complete outfit for irrigation that will interest gynecologists and genito-urinary men.

—An interesting exhibit presenting new ideas will be that of the A. S. Aloe Co., St. Louis, Space 71. There you will see, made in a minute, a Carbon-Dioxid Ice Pencil, 110 degrees below zero, Fahrenheit. The adaptations of the electric current to therapeutic uses will be demonstrated with the Aloe Electro-Therapeutic Cabinet. The Microscope Outfit that enables one to begin practical work the day you get it, will also be shown.

—The American Surgical Specialty Co., Chicago, Space 83, will show a line of instruments of interest to the oral surgeon and general practitioner. They have combined their electrically lighted equipment into a complete diagnostic and operating set. An especially interesting feature of their exhibit will be their Diagnostolite, a clean, cool lamp of great brilliancy, suitable for transillumination and examination.

—Bard-Parker Co., New York, Space 125, will feature the Bard-Parker Detachable Blade Knife. This knife has detachable wafer blades, operating and abscess blades, all interchangeable, made of razor steel and with razor edge.

—W. A. Baum Co., Inc., New York, Space 40, will have an exhibit of the Baumanometer, a highly developed blood pressure apparatus for use in laboratories and daily practice. The instrument is described as a "Super-Sphyg" and is a Precision Gravity-Gage for Blood Pressure. The question of blood pressure is, today, such an absorbing one that it will be of benefit to the visiting physician to inquire into the merits of this modern instrument.

—Becton, Dickinson & Co., Rutherford, N. J., Spaces 99 and 100, will display the genuine Luer Syringes, Yale Quality Needles, Bedeco Thermometers, Kehler Stethoscopes, Ace All Cotton Elastic Bandages and Asepto Breast Pumps. The new features of their exhibit will be the Ace Bandage and the Asepto Breast Pump.

—Bernstein Mfg. Co., Philadelphia, Spaces 138 and 139, will exhibit their usual line of quality steel furniture and sterilizing apparatus, where they will be glad to greet their friends.

—Frank S. Betz Co., Hammond, Ind., Spaces 7, 8 and 9, will feature specially constructed hospital furniture, consisting of instrument cabinets and a new model operating table. They also will show for the first time a high pressure sterilizer adaptable to service in every physician's office; also a very large display of American made surgical instruments.

—Wilmot Castle Co., Rochester, N. Y., Space 1, will exhibit several new "Castle-Rochester" Sterilizers. They should be of interest to all physicians who want up-to-date equipment for their offices. Besides office sterilizers, they will show a new combination outfit for use in small hospitals.

—The DeVilbiss Mfg. Co., Toledo, Spaces 25 and 26, will have a complete exhibit of their guaranteed nose and throat Atomers, for professional and home use. A first showing of new outfits recently added to their line will be of special interest. Several factory and road representatives will be in attendance.

—Charles F. Hindle, New York, Space 144, will exhibit electrocardiograph equipments for photographically recording the activities of the heart. Two models of the string galvanometer with complete optical systems and recording instruments will also be exhibited. The smaller model will be of particular interest to the physician desiring to see equipment for office use. Frequent demonstrations will be given. Typical electrocardiograms showing many of the heart's irregularities will be extensively illustrated.

—The Jaeckh Mfg. Co., Cincinnati, Space 81, will have an interesting exhibit of the latest improved Robertson Tankless Compressed Air and Vacuum Machines and Cabinets, including improved ether anesthesia apparatus with simple warming device, apparatus for evacuating and medicating the sinuses, atomizers, nebulizers, etc. Also Gold Medal hand operated compressed air outfits. Dr. Robertson will be in charge.

—E. Leitz, Inc., New York, Spaces 104 and 109, will demonstrate a number of new apparatus, possibly with representative models if they are available at the time of the exhibit.

—Charles Lentz & Sons, Philadelphia, Space 88, will exhibit a general line of Surgical Instruments, including some of the most modern instruments they manufacture for some of the leading surgeons. The new Lentz Tonsillectome will be one of the most interesting, especially to nose and throat specialists.

—The Lungmotor Co., Boston, Space 18, will demonstrate the Lungmotor, a resuscitating device of merit. Instantly adjustable—new-born to adult. Used by the U. S. Government, American Red Cross, Bellevue Hospital, leading industries, cities, hospitals, beaches, etc.

—V. Mueller & Co., Chicago, Spaces 55, 56 and 57, will have, as in former years, an extensive exhibit of instruments for the specialist in every branch of surgery. The visitors will see at this booth, practically everything that is new in instruments and apparatus for their particular line of work. Electrically driven bone surgery apparatus, electrically driven anesthesia and suction apparatus of the most modern types will be demonstrated. A special feature will be a complete collection of illuminating and exploring instruments for use in every cavity of the human body.

—Ostby & Barton Co., Providence, R. I., Space 12, will show for the first time their line of quality "Triple Crown Surgical Instruments and Needles made in the United States." These people were manufacturing jewelers for forty years. During the war they turned the energy and push of their large six story factory into the manufacture of quality surgical instruments and needles. The fine work that the skilful, careful jewelers have turned out predicts a bright and prosperous future for instruments made in the United States.

—Harvey R. Pierce Co., Philadelphia, Space 65, among other things, will feature the Albee fracture and orthopedic table, U. S. Army standard splints and other fracture treatment apparatus; also a Landon spinal mercury manometer.

—Sanborn Co., Boston, Space 82, will demonstrate the construction and operation of the improved Sanborn Blood Pressure Outfit. They will also show for the first time, another important addition to medical equipment: the Sanborn Portable Respiration Apparatus for measuring absorption of oxygen, as required in the study of total metabolism. Without gas analysis physicians will have an opportunity to observe and directly determine the amount of oxygen being taken into the respiratory system during a definite interval.

—The J. R. Siebrandt Mfg. Co., Kansas City, Mo., Space 89, will demonstrate Siebrandt's "Eveready," a modern surgical utility appliance for treatment of fractures where traction or suspension are necessary. Siebrandt's "Eveready" is a Buck's Extension, which, with its special attachment, is modified to meet every height or angle for traction or suspension.

—C. J. Tagliabue Mfg. Co., Brooklyn, Space 105, will exhibit the "Tag-Roesch" Sphygmomanometer. Interesting demonstrations will be given. Look for the sign of the "Tag."

— Taylor Instrument Companies, Rochester, N. Y., will exhibit a new design of an office type Sphygmomanometer. This instrument is so designed that it may stand on the physician's desk or be attached to a panel on the wall, well removed from the patient. The diameter of the dial is 6 inches. The oscillations on the hand of the dial by reason of the enlarged field are magnified. This instrument is designed specifically for hospitals, offices and clinics. Taylor Instrument Companies are also distributing a small booklet with the newer findings on the value of humidity in medical practice.

—George Tiemann & Co., New York, Space 68, will have many new designs of instruments of their own special manufacture on exhibition at their booth, including the Bennett, Flagg and Hasbrouck inhalers for ether and nitrous oxygen, the Boch-Benedict colorimeter, Kaliski salvarsan apparatus, Wight's blood transfusion apparatus, Kemp proctoclysis, direct light electric ophthalmoscopes and accessory instruments and a number of surgical instruments of new design.

—The Weder Mfg. Co., Philadelphia, Space 6, will display their "De Lyte Surgeon" Diagnostic Case. They will also feature their Simplex Surgeon, an interesting Pocket Surgical Set.

OPTICAL GOODS

The war has given increased impetus to the manufacture of optical goods in the United States. The various manufacturers to be represented at the meeting are now in a better position than ever before to supply the needs of the profession. A study of their displays will be time well spent.

—Bausch & Lomb Optical Co., Rochester, N. Y., will exhibit in Spaces 44 and 45. Although they took full part in wartime activities they have resumed the most of their regular service. They will show their physician's microscopes, a new model freezing microtome, and centrifuges. Particular interest will attach to the exhibit of ophthalmological apparatus, the development of which is especially notable, and to the hemocytometers which are of Bausch & Lomb manufacture.

—The DeZeng-Standard Co. of Camden, N. J., manufacturers of Eye, Ear, Nose and Throat Diagnostic Equipment, will exhibit their products in Space 11. In addition to their standard equipment, they will have several new intruments which will be shown for the first time at this meeting, among them a new Electric Ophthalmoscope, a new Electric Retinoscope and a new Phoro-Optometer. Demonstrations will be given daily by expert attendants.

—The General Optical Co., Mount Vernon, N. Y., Space 17, will show a number of instruments especially designed for ophthalmologists. During the war, almost the entire production of the company was given over to war orders. Particularly popular at their exhibit will be the Loring Ophthalmoscope. This instrument will be displayed with the other products in the Genothalmic Sets consisting of Hare Marple Ophthalmoscope, Genothalmic Retinoscope with the Crampton junior, senior or cord lighting handles. For the first time their entire new line of Genothalmic

Sets will be shown. The Hare Automatic Perimeter with the automatic color changing device will also be on display as will the Universal Ophthalmometer. Practical demonstrations will be given.

—E. B. Meyrowitz, Incorporated, New York, Spaces 38 and 39, will exhibit specialties for eye, ear, nose and throat work. Of particular interest will be their Unistat occupying a floor space of 14 x 14 inches, which produces cautery, high frequency, galvanic and diagnostic light currents, as well as pressure, suction and pneumomassage. Also to the Braun Adenotome: A combination of curette and adenotome possessing all the advantages of either.

ORTHOPEDIC APPLIANCES, CORSETS AND CLOTHING

In these exhibits will be found tried and proved appliances for correcting bone injuries, deformities, malposition; also surgical and maternity corsets, hospital uniforms, etc.

—Ambulatory Pneumatic Splint Mfg. Co., Space 79, will demonstrate the use of Ambulatory Pneumatic Splints, in the reduction and treatment of fractures of the hip, thigh and leg by means of which patient may remain out of bed. They will also show the Ambumatic Washable Abdominal Supporter. The Henning Artificial Hand and Arm will also be demonstrated.

—Anatomik Shoes will be shown at Space 3 by the Anatomik Footwear Company of New York. They will show how this well-known men's, women's and children's shoe prevents and corrects many foot troubles. Opportunity will be afforded every member of the A. M. A. who acquires "Boardwalk feet" while in Atlantic City to learn from personal experience the relief obtainable in Anatomik shoes.

—The Berger Bros. Co., New Haven, Conn., Space 35, are planning to exhibit a complete line of Spencer supports for visceral ptoses, sacro-iliac strain, intestinal stasis, floating kidney, hernia; prenatal supports, etc. The exhibit will consist of supports for both men and women.

—The Carnes Artificial Limb Co., Kansas City, Mo., will have representing them at Booth 36 one armless man and a man having lost just one arm. Both of these men will demonstrate willingly what may be accomplished by the use of a Carnes Arm, and show conclusively that a man who has lost one or both of his arms is not to be considered as helpless.

—The Earnshaw Knitting Co., Chicago, Space 75, will show how to dress a baby completely without pin or button in Vanta Baby Garments. For years theirs has been one of the popular booths, by reason of the unique and attractive display furnished, as well as by the interesting demonstrations of competent nurses representing them. This year for the first time, they will show an outfit for babies which is put on with one movement.

—Stover & Bean Co., Lowell, Mass., Space 27, will show their Socket-Fit Arch and Heel Shoe. This shoe is said to be nature-shaped, placing the foot in its natural barefoot position, and by specially constructed patterns and individual modeling of the last, holds the foot in place, giving the proper amount of support to the bones and muscles so that there is no undue pressure or strain on any part of the foot.

—Weissfeld Bros., New York, Space 80, will show their Hospital Wearing Apparel, a most up-to-date line. Uniforms for the surgeon, the nurse and office attendant. A fine line of Palm Beach and Mohair suits will also be on exhibition. A souvenir given to every visitor.

—The Wright Wire Co., Worcester, Mass., Space 31, will exhibit their Excelsior Universal Wire Gauze Splint; also their Excelsior Automobile Towline. The splint is furnished rolled, the size of an ordinary roller bandage, and enclosed in a paper carton. The towline is made of steel wire cable, five-sixteenths inch in diameter, with manila slings and sister hooks for ready adjustment, and all enclosed in a canvas bag.

PHARMACEUTICALS AND BIOLOGIC PRODUCTS

The work of the physician is so intimately dependent on these products that an acquaintance with the different pharmaceutical houses, their preparations, their service, etc., is often of great advantage. At the Commercial Exhibit is his opportunity to meet representatives of such firms, and see pleasing displays of their new as well as standard remedies and secure information about the application of these remedies, which will be of practical value in every day work.

—The Abbott Laboratories, Chicago, Space 69, will feature American-made medicinal chemicals. Not only will they exhibit a full line of the Dakin antiseptics, Chlorazene, Dichloramine-T, Chlorcosane and Halazone, but they will bring in evidence several American-made synthetic medicinal chemicals for which it holds licenses from the Federal Trade Commission under German patents. Special attention in this exhibit will be given to Barbital, Procaine and Phenylcinchoninic Acid.

—Armour & Co., Chicago, Space 113, will exhibit a complete line of endocrine gland preparations and organotherapeutic agents; and will also show their Sterilized Surgical Catgut Ligatures, plain and chromic. The Armour Ligatures are manufactured from material selected especially for surgical purposes. Pepsin, Pancreatin, Thyroids, Corpus Luteum, Pituitary Liquid and other endocrine gland preparations will also be featured.

—B. B. Culture Laboratory, Inc., Yonkers, N. Y., Space 2, will exhibit B. B. Culture, a liquid suspension of Bacillus Bulgaricus. The advantages of the preparation as a biologic antiseptic in internal and external use will be explained and microscopic slides of the culture shown. Complimentary bottles will be mailed to visiting physicians who leave their names.

—The Hollister-Wilson Laboratories, Chicago, will exhibit at Spaces 94 and 95 their long-established line of Ligatures, Sutures and Surgical Material, and will show in addition a full line of glandular Autacoids, Organic Extracts, Enzymes and Abattoir Pharmaceuticals. By proper laboratory methods they are able to assure the identity and therapeutic activity of the Autocoids, Enzymes or Organic Derivatives represented in the finished product.

—Hynson, Westcott & Dunning, Baltimore, Space 114, will introduce new ideas in the manner of showing their products. A competent staff of representatives, under the direction of Mr. W. Rodney Burton, will be in attendance to give visiting physicians just such information as they desire regarding the firm's therapeutic specialties and diagnostic agents and appliances. The new local anesthetic — Phenmethylol — and the new antispasmodic—Benzyl Benzoate—will be interesting features.

—The Kolynos Company, New Haven, Conn., Space 20, will exhibit experiments demonstrating the germicidal properties of Kolynos Dental Cream and illustrating its destructive power against both pathogenic organisms and those nonpathogenic bacteria which are believed to play an important rôle in the development of dental caries. The Kolynos Co. maintains chemical and bacteriological laboratories devoted to research work in oral hygiene.

—The Maltbie Chemical Company, Newark, N. J., Space 112, the manufacturers of Calcreose, will display the various forms in which Calcreose, a combination of calcium with pure beechwood creosote, can be administered, solution, powder and tablets, in original packages, and will have for distribution all information available as to the effectiveness of this new creosote product.

—The Maltine Company, Brooklyn, Space 101, will exhibit its well-known line, making a particular feature of Maltine Malt Soup Extract, with which the preparation of Malt Soup, as devised by Keller, becomes easy and satisfactory. Visiting lists and sets of memorandum books will as usual be presented to visiting physicians.

—H. A. Metz Laboratories, Space 135, will present to conventionists an exhibit of their products, Salvarsan (Arsphenamine-Metz), Neosalvarsan (Neoarsphenamine-Metz), and Novocain (Procaine-Metz). Methods of preparation of salvarsan solution will be demonstrated and other unique features will be presented; which promises to make this display particularly interesting to every visiting physician.

—The Pulvola Chemical Company of Jersey City, Space 4, will exhibit their line of nonabsorbent powders—the Dolomol Stearates, Pulvola Toilet ("The Doctors' Baby Powder") and Pulvola Foot Powders. They will show their odorless, tasteless, impalpable, dry, white Ichthyol—as combined with Dolomol. Their unique demonstration, "The Tale the Two Tumblers Tell," is an eye-opener on toilet powders and "dry ointments," and invariably attracts attention and keen interest wherever shown.

—The Radium Chemical Company of Pittsburgh, Space 111, will display a full line of surface and cavity applicators, including necessary screens, etc. Their representatives will give demonstrations of the physical properties of radium, and will be prepared to discuss the technic of its application. Conventionists are cordially invited to visit their Laboratories at Pittsburgh, either before or after the meeting in Atlantic City.

—E. R. Squibb & Sons, New York, Spaces 15, 16, 21, 22 (band stand), in addition to their chemical and pharmaceutical preparations, an instructive display will be made of their biological and biochemical products. The position of the band stand, which has been secured for their exhibit, makes it possible to plan such a comprehensive display that it cannot fail to attract and hold the interest of the visiting physician.

—The Takamine Laboratory, Inc., New York, Space 84, intend to hold clinics for the benefit of conventionists, showing the method of making solutions and the proper injection of Arsaminol and Neoarsaminol. The clinic will be in charge of a biologist of note, and physicians are cordially invited to attend it.

X-RAY AND ELECTROTHERAPEUTIC APPARATUS AND ACCESSORIES

The applications of roentgenology and electrotherapeutics have increased so rapidly that it is difficult to keep apace. This year's exhibits of x-ray outfits and other electrical equipment will show many of the recent advances in this field, and likewise reveal to the physician the extent to which the various manufacturers are cooperating with the profession by furnishing the machinery, supplies, etc., for doing this important work.

—The Baker Electric Co., Hartford, Conn., Space 141, will show their Baker Military Model T Static Machine. Powerful, light and compact. Ample capacity for all standard static work. Standardized, calibrated, graduated. You will be very welcome; their booth is at your service, and they will feel it both an honor and pleasure to show you what they have and to give any explanation and information you may desire.

—The Campbell Electric Co., Lynn, Mass., Spaces 86 and 87, will exhibit a Sure X Transformer, such as they furnished to equip the Mexican border hospitals and the original Pershing Expedition and over 100 reconstruction and debarkation hospitals in France and the United States. The Campbell Motor Driven Tube Tilt Table, besides the latest Bedside Coolidge Unit and a complete line of high frequency apparatus, will also be shown.

—The Chicago Surgical and Electrical Company, Chicago, Space 110, will show an entirely new apparatus, the Electrothermophore, for the treatment of specific urethritis by heat, superinduced from electricity. Many other new apparatus will also be shown, well worthy of attention.

—The Eastman Kodak Co., Rochester, N. Y., Spaces 46 and 47, will make an exhibit of the possibilities of x-ray photography with Eastman Dupli-Tized X-Ray Films under standard conditions of exposure and development with the various types of small machines now on the market. They will also display negatives made with Seed X-Ray Plates. Their whole exhibit will be designed to emphasize the increased effectiveness of diagnosis obtained by the use of standard photographic methods.

—The Engeln Electric Company, Cleveland, Space 54, will show their new Portable Universal Stereoscopic X-Ray Unit with Coolidge Radiator Type Tube, which is a complete Roentgen Plant in one unit, something entirely new and different. The Portable Fluoroscopic Unit and Dental Coolidge Tube X-Ray Unit will also be shown. This apparatus represents a late development in Roentgen Laboratory practice and will prove instructive.

—H. G. Fischer & Co., Chicago, Space 59, will show their latest Interrupterless Transformer X-Ray equipment, No. 2. The many improvements in x-ray generating apparatus during the war will be noticed in this apparatus, for it is their latest model. In addition, the smaller high frequency apparatus will be demonstrated, including the Suit Case Portable Coil. A full and complete line of standard x-ray accessories will also be shown.

—The Hanovia Chemical and Mfg. Co., Newark, at their Booth 98, will offer visitors an opportunity to thoroughly inspect their Quartz-Mercury Arc Lamps, as designed for the use in modern therapeutic practice. Their Alpine Sun Lamp and Kromayer Lamp will be put in actual operation, and competent demonstrators will be on hand to explain in detail their therapeutic use and value.

—The exhibit of the Kelley-Koett Mfg. Co., Covington, Spaces 90 and 91, will consist of an x-ray equipment of a condensed type, designed with especial reference to the requirements of hospitals and clinics, wherein it is desired to handle all branches of x-ray work within a minimum floor space and with the least possible noise and vibration. Their new Bedside Unit will be here shown for the first time, as well as a number of post-war accessory novelties. The government method of localizing foreign bodies will be demonstrated with their portable trochoscope, as used in France.

—The McIntosh Battery & Optical Co., Chicago, Spaces 63 and 64, will exhibit the results of their forty years of experience as manufacturers of electrotherapeutic equipment by displaying the Hogan Silent Roentgen Transformer, which is giving such splendid satisfaction in connection with the new Green & Bauer Self-Rectifying Tube; also Universal modes, Polysine Generators and Bristow Coils, which are being used extensively in reconstruction hospitals throughout the United States and Canada. A visit to their booth will be of educational value.

—Thompson Plaster Co., Leesburg, Va., Spaces 60 and 61, will have the largest display they have ever had of their X-Ray and Electrotherapeutic Apparatus. They will exhibit for first time their new oil immersed transformer F—a high type, high power treatment outfit that can be run continuously also their new Eurisco, an outfit built specially for nose and throat men—a complete equipment in one cabinet; also two styles of X-Ray Interrupterless X-Ray Transformers.

—Victor Electric Corporation, Chicago, Spaces 48, 49, 50, 51, 52. Their exhibit will contain more new apparatus and appliances than were ever shown at any one of their exhibits. In addition, several of the standard Victor equipments with new improvements will be on display.

—The Wappler Electric Company's exhibit, New York, Spaces 23 and 24, will contain their latest Bellevue Model Roentgen-Ray machine with oil-immersed transformer, one hundred step autotransformer and twenty step rheostat control. An important feature of this exhibit will be their Universal Stereoscopic and Fluoroscopic Table, which embodies a new self-balancing plate-shifting device and adjustable screen holder. The NitroKen tube (recently developed by the Wappler Co.) will also be in evidence. Of interest to electrotherapists will be the Telatherm and the Portable Telatherm, designed for U. S. Army hospitals.

UNCLASSIFIED

—The American Medical Association, Chicago, will have an exhibit of A. M. A. publications, and will present for the first time at a convention the new A. M. A. auto emblem which will interest every physician who drives a car. This exhibit in connection with the Superintendent's office, will be located in the Ball Room balcony, at the head of the left stairway.

—Dennison Mfg. Co., Framingham, Mass., Space 130, will make an attractive exhibit showing crepe paper bandages as efficient economical substitutes for the ordinary bandage. They will also have their *Surgical Dressing Pads made from a very absorbent paper and other specialties*, including tray covers with new embossed hemstitch edge effect, paper sputum pads, towels, napkins and surgical caps.

—S. W. Nourse, Palisade, N. J., Space 85, will have an interesting exhibit of Scientific Photography, illustrating how essential it is to have good photos for records, for publication and teaching; lantern slides from x-ray plate that will show the points of interest; a method of showing x-ray plates of a standard size from all the different sizes of x-ray plates without the risk of loss of the original; photos of patients before and after operations; pathological specimens photographed to metric scales; photomicrographs and other items of timely inetrest to the general practitioner, specialist and laboratory man.

—Waterproof Fabric Company, Chicago, Space 74, will exhibit Sani-Dri, a nonrubber waterproof fabric, and its merits will be demonstrated. Sani-Dri has given universal satisfaction to a large number of users for the past four years. Not only will the exhibit be interesting; it will be of practical value to the visitor. Be sure and get a complimentary surgical dressing.

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DIFFERENTIAL DIAGNOSIS OF PEPTIC ULCER *

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The diagnosis of gastric and duodenal ulcer is not made so frequently now as it was ten or eight or even six years ago. In 1912, for instance, the total number of patients seen for diagnosis, all of them with medical ailments and a large proportion complaining of "stomach trouble," amounted to 445; and among these a diagnosis of ulcer, gastric or duodenal, was made in twenty-eight. In 1918, with a total of 461 cases, the diagnosis of ulcer was made only ten times. The main reason for this decrease lies in the more rigid tests gradually adopted, and the attempt to substitute demonstration for inference, before a conclusion is reached.

The data on which the diagnosis of ulcer depended only a few years ago were obtained from history, physical examination and analysis of gastric contents.

IMPORTANCE OF THE HISTORY OF THE CASE

The history was considered of special importance and almost diagnostic. The well known points in this history are its chronicity, extending over years; its remissions, for weeks or months, during which the symptoms are absent or much less severe; its rhythmic cycle of events while an attack persists; the manifestations all relieved by taking food, but recurring at a variable interval after eating, and then increasing rapidly until food is taken again, or some remedy, such as soda, or until vomiting occurs; finally, the character of the patient's symptoms, such as heartburn, belching, water-brash, nausea and often severe pain before vomiting gives relief—in general, a complaint of acidity and sour stomach. If to these details there was added the story that the vomitus contained blood; or if a patient was first seen with hematemesis and presented a history of long-standing "sour stomach" preceding, gastric ulcer assumed the first place in the diagnosis.

Two facts, however, have gradually impressed themselves on me; first, a history such as the one outlined does not invariably mean ulcer; and second, ulcer may exist even though the history does not correspond to the usual type. One becomes convinced, as years accumulate experience, that the so-called ulcer history is only a hyperacidity history; that any condition giving rise to hyperacidity may thus simulate ulcer; and that to infer ulcer from history alone frequently leads to error. On the other hand, ulcer may exist without hyperacidity, with normal or subnormal acid values, and thus without presenting the familiar story we have learned to expect. Furthermore, experience with cases observed during the past thirteen years, on the records of which this paper is based, teaches that vomiting of blood is not a common incident of ulcer; and in 136 cases observed during the past six years, in which the diagnosis of ulcer seemed clearly demonstrated by all the methods to be described later on, hematemesis occurred in only fifteen. It is also a well known fact, confirmed by numerous observers, that hematemesis may occur in association with hyperchlorhydria from any cause, when no ulcer exists.

THE VALUE OF THE PHYSICAL EXAMINATION

Physical examination has always been considered chiefly of value in ulcer for the negative evidence it presents. The only sign expected was a point of tenderness elicited on pressure over the epigastrium, or one or the other hypochondrium. But this evidence, of course, is entirely subjective and dependent on the patient's varying sensibility to pain; so that neither its presence nor its absence is conclusive. There has never been any objective sign of ulcer, nothing that could be definitely seen or felt by the one examining. A tumor palpable in the gastric area may very rarely, in a thin-walled abdomen, be due to the cicatricial tissue of an old ulcer; but such a tumor must always be looked on with suspicion, is always more likely to be a neoplasm, and ought always to be considered of sufficient seriousness to justify exploratory laparotomy. The discovery of a peristaltic wave across the stomach, from left to right, means pyloric obstruction and hypertrophy of the gastric walls; but it does not by itself indicate ulcer any more than it does cancer or adhesions, as a cause of the obstruction. The entire absence of any abnormality on physical examination has thus long been assumed to be characteristic of ulcer, when the history has already created an impression that ulcer exists. But we now know that several other intra-abdominal conditions, such as an obliterative appendicitis or a gastroptosis, may present a similar absence of physical signs, with an exactly similar ulcer history. Likewise tabes dorsalis may produce recurring gastric attacks closely simulating those of ulcer, with entirely negative findings over the abdomen on physical examination.

ANALYSIS OF STOMACH CONTENTS

In times past, all clinicians have depended much for diagnosis on the analysis of the stomach contents. The characteristic finding was hyperacidity; and when this was proved to exist. after a typical history had been

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* Read before the San Francisco County Medical Society, April 8, 1919.

elicited and a tender spot in the epigastrium had been found, the last bit of evidence was supposed to have been adduced to justify a diagnosis of ulcer. It is true, on the one hand, that ulcer is most often associated with hyperchlorhydria, although it may be found with acidity within normal limits or even below normal. But hyperacidity, on the other hand, may be associated with numerous other conditions besides ulcer. And so the old diagnostic combination of characteristic history, negative physical findings, and stomach contents showing hyperacidity can no longer be depended on. A conclusion based on these data alone used to lead us constantly into error, and would do so still, if we had no other aid in reaching the truth.

VALUE OF FLUOROSCOPY AND ROENTGENOSCOPY

Fortunately we have now another method of obtaining information, namely, by fluoroscopic examination and by roentgenograms of the gastro-intestinal tract. This mode of investigation has gradually developed during the past decade until now it has become indispensable; and in no case of suspected ulcer should a conclusion be reached without its aid. The information thus obtained about the outlines of the stomach and the duodenal cap, the rate of peristalsis and the emptying time of the stomach, adds demonstration to inference and either confirms or disproves the suspicion aroused by history, physical examination and analysis of stomach contents. We have learned, if no evidence of ulcer appears from the roentgenographic examination, to distrust all the other evidence, no matter how convincing it appears. On the other hand, apparent defects in the outlines of the pylorus or the duodenal cap, suggesting the presence of ulcer, should not be interpreted as positive proof unless other evidences coexist, in history and stomach analysis. This whole question of the results obtained by gastro-intestinal roentgenographic examinations is a very serious one for the clinician; for no man can devote his time both to clinical investigation and to roentgenographic technic without doing injustice to one or the other; and as a consequence each part of the work ought to be entrusted to a specialist in his own line. It is well known that improper technic may easily cause defects to appear in roentgenograms that do not really exist in the body, and the roentgen-ray technician must know how to avoid these and how to interpret what the plates show. He must be willing to repeat examinations to confirm dubious results, and not too ready to furnish a diagnosis from his findings alone. What the clinician wants is roentgenographic evidence, not roentgenographic diagnosis. This evidence is of great value, but only when taken in connection with that obtained by other methods previously described. Taken alone, it is worse than worthless, because it is misleading and confusing.

OTHER CONDITIONS PRODUCING SYMPTOMS RESEMBLING ULCERS

The question next arises, What other conditions may produce symptoms and signs resembling those of ulcer, and how are we to avoid mistaking one for the other? It is surprising how many times we find now, with our increased facilities for study, what we suspected to be ulcer proves to be something else altogether; but, on the other hand, we know with greater certainty when ulcer does exist and we make fewer errors in its recognition than we used to make.

1. *Chronic Appendicitis.*—This deserves first place when we consider the conditions that simulate ulcer, because it often leads to hyperchlorhydria and so to the typical ulcer history. So far as we know, anything that delays the emptying of the stomach results in hyperacid secretion, and in chronic appendicitis it is a reflex pylorospasm that produces this result. From the history alone, it is often absolutely impossible to decide that ulcer is not the cause of the stomach symptoms that follow. The patient's attention is directed to the stomach, and of this alone he complains. Yet if questioned closely, he may recall intestinal upsets at times in addition to the stomach trouble, such as occasional attacks of cramps and diarrhea, attributed to some improper food or to "ptomain poisoning." He may even recall periods when for days at a time he felt sore and tender in the right lower abdomen. His history is frequently one of chronic constipation and of repeated resort to cathartics, especially when his stomach condition is worst. In all these details we get a clue to the possible existence of trouble in the appendix, even before physical examination is made. Of course, if definite tenderness and rigidity and muscle spasm, and a palpable thickening are found over the appendix, this organ will be suspected as the cause of the stomach complaints. But so often the signs are vague and indefinite in this area, especially with the so-called obliterative appendicitis, that they may be overlooked on repeated examinations and by the best observers, and the real cause of the stomach symptoms will be assumed to be in the stomach itself, particularly after gastric analysis reveals a high grade hyperchlorhydria. But if in such a case the roentgenographic report is negative as regards ulcer, that diagnosis must certainly be reconsidered; and if, on fluoroscopic examination, it is equally positive as regards tenderness at the appendix site, delay in the cecum or in the appendix itself, with evidence of fixation of the cecum to the abdominal wall, then the diagnosis of chronic appendicitis can be reached with sufficient certainty to justify surgical procedure. There seems no excuse these days for the old error, so frequently made, of an operation for ulcer, resulting in the discovery of no ulcer present, followed by a second incision over the appendix for its removal. It is always possible to decide this question in advance, before the case is sent to the surgeon, if only sufficient care is taken to get all the evidence together, and sufficient judgment is exercised as to what the evidence means.

2. *Chronic Cholecystitis.*—Not all chronic inflammation of the appendix simulates ulcer, nor does all chronic inflammation of the gallbladder, but only those groups of cases in which hyperchlorhydria is present and the chief complaint is of the stomach. In gallbladder disease, as in appendix disease, this group is a large one; and the patient's story is so persistently made up of the symptoms characteristic of ulcer that it frequently misleads. In addition to these symptoms, however, there is another set in the background, comprising occasional attacks of soreness and pain in the right side at the costal margin, a sense of fulness and distention there as if something was in the way, a feeling of lameness and stiffness on movements of the body involving that side. If these attacks develop into sharp paroxysms of colic, with transient jaundice, they seldom fail to be remembered; but lesser manifestations may be withheld from the patient's history, so intent is he on relating his stomach disturbances and

so unimportant do the other incidents seem to him in comparison. Physical examination soon after one of these exacerbations of a chronic gallbladder inflammation may reveal much tenderness and definite muscle spasm at the right costal margin, with increased fulness and tension there; but at other times no evidence whatever may be found to make one suspect the gallbladder, and physical examination may be set down as negative. The stomach analysis shows hyperchlorhydria, but nothing to indicate either ulcer or gallbladder disease as a cause. The roentgenographic examination, however, gives valuable assistance in differentation; on the one hand, eliminating the evidences of gastric or duodenal ulcer; and on the other, by demonstrating a high hepatic flexure, and perhaps a stomach drawn to the right, indicating adhesions of the gallbladder to the surrounding organs from pericholecystic inflammation. At times the outlines of an enlarged gallbladder can be made out in the roentgenogram; and in a certain proportion of cases gallstones are apparently demonstrated; but these findings are not certain enough to be relied on, so that neither their absence nor their presence is conclusive. But the data as thus collected will make the ultimate diagnosis practically certain; so that no patient should by error be grouped these days among the ulcer cases when his real disease is in his gallbladder.

3. *Gastroptosis.*—We owe to roentgenographic evidence our discovery of the frequency with which prolapse of the stomach occurs. It is true that this faulty position does not always cause symptoms and may exist without giving rise to any complaint whatever on the patient's part. It is also true that its manifestations, when they do occur, are of several different types. But there is undoubtedly one large group of gastroptosis cases that closely resembles ulcer. This is because of the hyperchlorhydria that results from the faulty position. The explanation for this hyperacidity lies, as always, in the delay in emptying of the stomach, probably because of the drag on the attachment of the duodenum, which cannot descend freely with the stomach, even though the greater curvature lies below the pelvic brim. The highest degrees of hyperchlorhydria are frequently found with this condition, and the consequence is a history corresponding closely with that of gastric ulcer, in no way to be distinguished from it. Physical examination is absolutely negative as regards the stomach and abdomen, except for the discovery of a prolapsed right kidney which frequently occurs coincidently with the gastroptosis, and except after the old method of inflation of the stomach with carbon dioxid, which shows the stomach outlines abnormally low but never with the same accuracy as demonstrated by the fluoroscope or the roentgenogram. This absence of any signs on physical examination, except for epigastric tenderness, which is as common in one case of hyperchlorhydria as in another, is of course one of the characteristics of ulcer. As regards the roentgenographic evidence, it excludes ulcer, on the one hand, no matter how firm our preconceived notion of the case, formed from history, physical examination and analysis of gastric contents; and it demonstrates gastroptosis, on the other hand, more definitely than any other method can. While there are differences of opinion as to how low in the abdomen the stomach may normally be found, there seems to be agreement that a greater curvature lying below the level of the iliac crests constitutes an undoubted abnormality. Symptoms may arise, however, even with lesser degrees of prolapse, and this fact must be remembered. The therapeutic test confirms the diagnosis, for a properly fitted abdominal support, holding up the stomach, brings relief gradually of all symptoms. It is significant that in former days of less accurate diagnosis, the classical treatment for ulcer has always been prolonged rest in bed and a diet of milk and cream that increased weight. This treatment today is just as effectual for gastroptosis, for the rest in bed and increase in abdominal fat restore the stomach somewhere near its normal position, even without external support. Possibly some of the cases formerly called ulcer and cured by routine treatment were really gastroptosis.

4. *Gastric Cancer.*—Usually the history in cancer is entirely different from that in ulcer, as regards shorter duration of symptoms, their persistence without intermission, and their character. But not infrequenly cancer occurs on an ulcer base, and the history then becomes confusing and no longer characteristic. Symptoms may have persisted for years, with intervals of comparative good health between attacks, and the details of these former symptoms may correspond in every respect to those of ulcer. But when cancer develops, the story is of a change in the manifestations; the pain becomes more constant; food is not desired; soda and other remedies, as well as food itself, no longer give relief; taking food causes distress at once, with no interval of comfort following; and the patient loses in weight and color as in no previous ulcer attack. Physical examination now may show definitely a tumor in the upper abdomen. Its presence, as already stated, is always to be looked on with suspicion; though its absence does not exclude cancer, because it may be concealed and out of reach.

The characteristic stomach contents in cancer are usually altogether different from those in ulcer; with poor trituration of the test meal, and complete absence or great decrease of free hydrochloric acid. But when cancer has developed as a sequel of ulcer, the secretion of hydrochloric acid may continue to such an extent that the amount is normal or only moderately subnormal for some time after malignant degeneration has taken place. Finally, whether or not a palpable tumor has been found, the roentgenograms will show its presence or absence and its site, if present. The appearance of the filling defect in cancer is usually different from that in ulcer, so that a conclusion can be reached as to its meaning; but in making a diagnonsis, the data elicited by history, physical examination and gastric analysis must all be taken into account, as well as the roentgenographic findings; and in case doubt still exists, it is wiser to advise exploratory operation without too much delay.

5. *Other Intra-Abdominal Pathologic Considerations.*—There are other conditions that now and then give a history closely resembling that of ulcer because they produce hyperchlorhydria; but they can usually be recognized and differentiated if only care enough is observed in collecting the data. Such, for instance, are intestinal parasites, especially tapeworm, which can never be missed, however, if the stools are examined for segments and ova. Small hernias due to defects in the abdominal wall, around the umbilicus or along the linea alba above it, may reflexly cause hyperchlorhydria and its usual train of symptoms; but such protrusions, even though very slight, can be found if

search is made for them. The absence of other physical signs and the negative findings in roentgenograms prove that other cause does not exist for the history; and correction of these defects, with prevention of further intestinal or omental pinching, removes the gastric symptoms. Chronic pelvic inflammatory disease in women, and old adhesions involving the intestinal wall in a former peritonitis, are other conditions that at times may simulate ulcer in the way described. Pelvic examination, giving direct or positive evidence, and roentgenograms giving indirect or negative evidence, call attention to the site of the real pathologic condition.

6. *Gastric Crises.*—The hardest lesson to learn about abdominal disease is that of "gastric crises," due to no disease within the abdomen itself, but to disease in the spinal cord. These crises come at irregular intervals, weeks or months apart, with good health between. They last for days or weeks, and the attacks are characterized by intense pain and by vomiting, so that the patient fears to take food and cannot keep it if he does. No wonder the first thought with such a history is of some disease of the stomach; and commonly of ulcer as corresponding most closely in its manifestations. The physical examination of the abdomen is negative in such case; and the stomach contents most often show hyperchlorhydria after an attack is over. It is not surprising, therefore, if such symptoms have in the past misled us, even to the point of advising a gastro-enterostomy to prevent their repetition. Now, however, the negative roentgenographic findings come to our rescue, to save us from error; and at all times, even without roentgenograms, we have other definite signs to point out the real disease, if only we take the trouble to look for them. First, these signs consist in alteration of reflexes, in one pupil or both; in patellar or Achilles tendons, perhaps only on one side; or in the plantar reactions to stimuli. Second, and most important, lumbar puncture and examination of spinal fluid for cell count and Wassermann reaction afford the most constant clue to the real disease present.

Gastric Neuroses.—These are still mentioned in the textbooks, in the differential diagnosis of ulcer, but their existence outside of textbooks must be considered very dubious. A history resembling that of ulcer, with hyperchlorhydria, does not occur without some pathologic condition somewhere in the body, usually in the abdomen, to explain it. In times past this "acid dyspepsia" has been considered as a possible result of a disturbance of the nervous system only; but such a supposition, with our increased facilities for eliciting facts, is no longer tenable. The exact cause of the clinical picture may not always be obvious, but one always exists, and careful search will sooner or later reveal it.

CONCLUSIONS

We have heretofore been too ready to diagnose ulcer, when it did not exist, because the history was typical; but now we have learned how many other conditions may simulate this history, and we demand other data in addition to the patient's story. On the other hand, when the history was not typical, ulcer was not suggested by it and we were likely to overlook its existence because our other means of recognition were so meager. Now we have learned that the patient's story of his ailment is not always the same; that some feel less discomfort from an ulcer than others do; and that only a part of the classical symptoms may be present, even when hyperchlorhydria is found and roentgenograms show definitely a pyloric defect or a deformed cap. The only way to avoid error, therefore, is to trust to no one element in the diagnosis; but to collect our data by history, by physical examination, by laboratory reports, and by fluoroscopic examinations and roentgenograms; and then to piece these data together as a child does the parts of a picture-puzzle, to see what they will ultimately make. Fifty years ago Thomas Huxley wrote:

> Sit down humbly before facts as a little child, be prepared to give up every preconceived notion, follow humbly wherever and to whatever abyss nature leads, or you shall learn nothing. I have only begun to learn content and peace of mind since I have resolved at all costs to do this.

THEORIES REGARDING BLOOD PRESSURE

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For a number of years, there have appeared from time to time books by various authors purporting to give to the reader a complete understanding of blood pressure, the causation and the measuring of changes in the various factors, and the blood-pressure conditions to be found in all diseases. Independent observers have also put forth formulas for the determination, by means of blood-pressure estimation, of cardiac efficiency.

Recently I have had the opportunity of studying blood-pressure findings in a large number of army officers and candidates for commissions in the army, chiefly in men over 30 years of age, medical officers being in a large majority. I am not here presenting statistics as to the distribution of these cases among different age periods, or as to the classifying of the blood-pressure readings obtained; for, while these figures might be of interest, it does not seem to me that such statistics help us to understand the conditions presented by the individual. What I wish to do is to point out some of the conditions met in this mass of material, to discuss the interpretation of the findings, and to suggest a new point of study in the analysis of blood pressures.

Most of the medical officers examined came to camp from a considerable distance, and were examined the day after their arrival, without opportunity for rest after the long journey. Being physicians, they were almost universally very nervous over the ordeal of the examination. Most of them were naturally constipated, and this constipation was increased by the journey, by the change of routine, and by the change in diet. To many, sleep under camp conditions was at first difficult. From all of these causes, it was not surprising that a large number of the candidates showed an elevation of the systolic blood pressure. In a great majority of such cases, however, rest, catharsis, and the fact of becoming accustomed to the new routine of life, soon brought the blood pressure down to within normal limits. It served to demonstrate in a very striking way the effect of overwork, nervous strain, psychic stimulation, and constipation, in raising blood pressure.

One fact that impressed me particularly is the frequency with which one meets a familial hypertension. Such a condition of continued elevated systolic pressure, in which most members of particular families share, the tendency apparently being hereditary, does not seem in such families to cause invalidism or to shorten life. Indeed, it has seemed to me that many such individuals with a sustained hypertension continue to have better than normal health and robustness; and that the hypertension, if it were not actually the cause of this, at least went hand in hand with their abundance of strength.

With a superabundance of energy and an abnormal vitality, one physician, 48 years old, 6 feet tall, weighing 190 pounds, hard as nails and the picture of health, had a constant systolic pressure of 190 to 200, with a diastolic of 110 to 120. He told me that his father was over 80 years of age, vigorous and active, in spite of a systolic pressure that had been around 200 mm. for years. The officer in question and his brother, three years his senior, had each of them presented similar pressures for years, yet had had the best of health. This officer showed a negative urine, a normal heart, no thickening of the peripheral arteries, and normal eye grounds.

Such a condition shakes our faith in any preconceived standard for normal systolic pressures. These familial hypertension cases as a general thing, in my opinion, can be accepted as representing to all intents, and for that particular family, a condition free from serious organic disease. Another type in which there is difficulty in setting down a standard for normal blood pressure is the case in which the hypertension is compensatory to renal or arterial disease. In this general category come those cases in men of 50 years or over in which the blood pressure has assumed a probably normal and physiologic elevation. Taken by and large, our conception as to what represents an unduly high systolic blood pressure in a given individual must take a good many facts into consideration, must be highly individualized, and must have considerable latitude, both as to the standard accepted and the interpretation to be placed on deviation from the standard.

Certainly I am not at all willing to concede that a high blood pressure, for example, 200 mm., means necessarily any of the things that we have always agreed that it did mean. It does not seem to me a proved fact that marked hypertension necessarily causes apoplexy; that it necessarily increases the probability of apoplexy, or of renal or arterial disease, or of ill health of any kind. If marked hypertension means of a certainty any of these things, why do some men live to far beyond the average age, in spite of continued marked hypertension of long duration? Granted that some pathologic condition would have been found present after death in these cases; granted that signs of nephritis or of arterial degeneration might have been present, proof is still lacking that the hypertension was the result of the lesions found; for, after all, if there were not some cause for the termination of life, these fortunate beings would have lived forever; and in my opinion any man who enjoys reasonably good health and an active life—as many men with marked, continued hypertension do—until past 75 or 80 years comes to his final end for the reason that his body is not immortal and is constructed to last for only seventy years or thereabouts.

Why is it that a considerable proportion of men with sclerosis of the peripheral vessels have a normal blood pressure, and that in a similar proportion of cases of hypertension there are soft radial arteries? Is it not true that we are putting undue weight on the occasional coincidence of hypertension and arteriosclerosis?

We have had certain standards set down for us by the pioneers in sphygmomanometry, most of which we have accepted blindly. Unfortunately, there has been little opportunity for exact observation correlating physiology and pathology along this line, and it seems to me that most of the supposed facts of blood pressure that we accept are still open to proof and subject to doubt.

Probably we can accept without serious question that the systolic pressure represents the point at which sounds are first heard with the stethoscope over the cubital fossa when the pressure in the cuff is dropping, and that the diastolic pressure is the lowest point at which these sounds pass their maximum, that is, the beginning of the "fourth phase."

What does the systolic pressure represent? We have been taught that a constant high systolic pressure indicates a permanent change in the capillaries, particularly the renal capillaries. Yet, if such be the case, why is it a fact that some patients with high systolic pressure may have their blood pressure lowered and kept at a normal level by repeated treatments, either with high frequency currents or with radium emanations internally? Incidentally, I would point to this influence of the high frequency currents or radium emanations on blood pressure, through their action on metabolism, presumably in oxidizing or otherwise destroying toxic products in the body, as supporting my theories as to the causes of individual blood-pressure readings. If there is actual change in the renal circulation, of such a nature that the capillaries can no longer dilate, then it must be a fact that an increase in systolic pressure is necessary to drive the blood through the kidneys. But it is a fact that many patients with contracted kidneys and high systolic pressure may be freed from symptoms for years and have a blood pressure normal for their age, as the result of treatment. This, to my mind, is explained by the theory that the systolic pressure, while a measure of peripheral resistance, and as such, a compensatory mechanism in these cases, is not the result of permanent changes in the renal capillaries, but is the effect of vasoconstriction, due to toxins circulating in the blood. Many cases of acute focal infection give rise to a temporarily increased systolic pressure, to be accounted for in the same way.

Similarly, many cases of hyperthyroidism present an elevated blood pressure. The effect of nicotin in raising systolic pressure is well known. It has been demonstrated to my satisfaction that the presence of constipation causes a rise in blood pressure. To my mind, there is a definite syndrome of slight cyanosis, increased aortic second sound, and increased blood pressure, that goes with many cases of intestinal stasis. Furthermore, I am certain that many persons leading a sedentary life can have daily bowel movements and still be constipated.

My argument is, that the systolic blood pressure is maintained by vasoconstricting substances in the circulating blood, and that an abnormally high blood pressure indicates that the blood stream contains either toxic substances (whether unexcreted products of metabolism or of focal purulent processes) or an excessive amount of the vasoconstricting secretion of particular glands of internal secretion. The functional test of cardiac efficiency suggested by the observation of Graupner[1] that when a man has been put through a certain amount of exercise, and when following this his pulse rate has returned to normal, his systolic blood pressure as a rule rises, would seem to me to be better explained by the theory that there was an increase in the amount of vasoconstricting internal secretion, liberated perhaps by the thyroid or suprarenal glands as a result of the increased circulation following exercise, rather than on the basis of the condition of the heart muscle.

In further support of this argument is the condition that one finds present in many cases of small-lunged emphysema, usually with chronic bronchitis and asthma. In many cases there is present a constant hypotension. Certainly some patients with severe bronchial asthma are much benefited by repeated administration of epinephrin. While as yet I have had no opportunity of working out my theory along this line, the known facts would seem to favor the existence in such asthmatics of a deficient secretion of vasoconstricting substances.

With regard to the meaning of the diastolic blood pressure, I feel that our present conceptions are even more wide of the mark. Observers in general feel that the diastolic pressure represents the power of the heart to maintain the circulation. In aortic regurgitation, in hyperthyroidism, and in "irritable heart of soldiers," we may have a greatly lowered diastolic pressure without necessarily any actual failure of the muscle power of the heart. Many clinicians feel that a diastolic pressure above 100 mm. indicates a myocardial defect. With this point of view I cannot agree. I believe, as do many others, that a systolic blood pressure of 150 or 160 mm. may be normal for a man 50 years old. To my mind, the ratio 2:3 for the diastolic and systolic pressures, respectively, should be maintained by the normal heart regardless of the rise or fall of pressure; and with a pressure of 160 mm. systolic, I believe that an intact circulation would show a diastolic pressure of from 105 to 110 mm. The relatively lowered diastolic pressure in thyrotoxicosis and in "effort syndrome" may perhaps be explained either as a vice of internal secretion, or perhaps in the case of "effort syndrome," as the result of intestinal stasis. In aortic regurgitation we may perhaps explain the low diastolic pressure as due to fatigue either of the vasoconstrictor centers or of the vasoconstrictor muscles. However, the explanation of the blood-pressure phenomena in aortic regurgitation seems more difficult than under the other conditions; it is a condition set off by itself, in which no rule seems to hold good. So far as any theory may be formed regarding aortic regurgitation, this condition helps merely to throw doubt on all other theories as to the significance and causation of changes in the diastolic pressure.

The more I study blood pressure, the less sure I become of any of the accepted interpretations regarding the test. Certainly, while I have as much respect for blood-pressure readings as ever, I feel that we must get a new conception as to the factors influencing the readings.

CONCLUSIONS

1. It is believed that increased systolic blood pressures indicate the presence in the circulating blood either of unexcreted putrefactive products absorbed from the intestine, from the kidneys, from focal infections in the dental alveoli, the nasal sinuses, the tonsils, the genito-urinary tract, or of secretions in abnormal amounts from the glands of internal secretion.

2. It is believed that in some cases at least, a lowered systolic blood pressure indicates a defective secretion of pressor substances, or an increased secretion of depressor substances by the ductless glands.

3. It is believed that the diastolic pressure, when it fails to conform to its normal ratio with the systolic pressure, is also influenced by abnormal products of metabolism or by abnormal amounts of ductless gland secretion in the blood stream.

4. It is not believed that either the systolic or the diastolic blood pressure gives any certain indication as to the condition of the cardiovascular renal system as such; and that when changes in the vascular system are accompanied by hypertension, neither condition is secondary to the other, both being held to be secondary to the presence of unexcreted toxic products of metabolism in the circulating blood.

483 Beacon Street.

A HOSPITAL EPIDEMIC OF STREPTOCOCCIC SORE THROAT WITH SURGICAL COMPLICATIONS

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The object of this report is to call attention to an unusual epidemic of throat infection in the surgical wards of a hospital, caused by a peculiar hemolytic streptococcus and sharply differentiated from the streptococcus bronchitis and bronchopneumonia which assumed epidemic proportions during the winter of 1917-1918 and has been present to a less extent during the winter of 1918-1919.

PREVIOUS EPIDEMICS

Streptococcic sore throat, septic sore throat, epidemic sore throat and milk-borne sore throat are terms used synonymously to denote the type of epidemic disease here described. The first description of a similar disease in the United States was that of an outbreak in eastern Massachusetts in May, 1911,[1] although in England writers had recognized and reported outbreaks previously.[2] Further outbreaks in the United States were reported from Chicago in December and January, 1911-1912,[3] and from Baltimore in February, 1912.[4] All of these epidemics were attributed to an infected milk supply, on fairly strong circumstantial evidence, and at the present time it seems to be generally accepted that this is the principal, if not the only, means of spread of this disease.

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[1] Graupner: Berl. klin. Wchnschr. p. 174, 1902; Deutsch. med. Wchnschr. p. 1029, 1906.

[1] Winslow, C. E. A.: An Outbreak of Tonsillitis or Septic Sore Throat in Eastern Massacusetts and Its Relation to an Infected Milk Supply, J. Infect. Dis. **10**: 73 (July) 1912.

[2] Pierce, W. C.: Outbreak of Septic Sore Throat Due to Infected Milk, J. State Med. **12**: 595, 1904. Chalmers, A. K.: An Outbreak of Sore Throat Among the Staff of Belvidere Hospital, Which Coincided with the Occurrence of a Teat Eruption in the Herd Supplying the Milk, Pub. Health **16**: 769, 1904. Savage, W. G.: Outbreak of Sore Throat at Colchester Due to Infected Milk, Pub. Health **18**: 1, 1905.

[3] Davis, D. J., and Rosenow, E. C.: An Epidemic of Sore Throat Due to a Peculiar Streptococcus, J. A. M. A. **58**: 773 (March 16) 1912. Capps, J. A., and Miller, J. L.: The Chicago Epidemic of Streptococcus Sore Throat and Its Relation to the Milk-Supply, J. A. M. A. **58**: 1848 (June 15) 1912.

[4] Hamburger, L. P.: An Epidemic of Septic Sore Throat in Baltimore and Its Relation to a Milk-Supply, J. A. M. A. **58**: 1109 (April 13) 1912.

SURGICAL PROBLEM

The present epidemic at the U. S. Naval Hospital, Chelsea, Mass., first came to attention on account of the numerous instances of postoperative rise of temperature in clean surgical cases and the too frequent deep infection of the wounds with a peculiar hemolytic streptococcus. At first, operating-room infection was suspected, but cultures from the throats and the hands of the operating-room staff were negative for hemolytic streptococci, as were cultures from catgut and clean wounds before closure. Ward surface infection of the wounds was excluded because most of the infected cases had a primarily clean, well closed incision, and the operating-room dressing had not been touched before discovery of the infection.

More careful analysis of the surgical case histories showed that every case of wound infection with this peculiar hemolytic streptococcus was preceded for two, three or four days by a sore throat and a sudden rise of temperature, with normal or nearly normal temperature up to the time of the appearance of the wound symptoms. The throat infection occurred usually a day or two after operation, sometimes longer. The temperature became normal in a day or two. It was also noted that patients that entered the surgical wards for simple hernia or varicocele operation sometimes developed this sore throat and rise in temperature before operation. From the throats of these patients, the same peculiar hemolytic streptococcus was constantly recovered almost in pure culture on blood agar plates, as found later in the wound infection.

When, after all possible precautions had been taken to eliminate operating-room contamination, there was a continuance of wound infection in the surgical wards, it was concluded that it must be due to a metastatic blood infection from the primary pharyngeal and tonsillar lesion.

At the same time that infections were occurring in the general surgical wards, or even earlier, there was a similar difficulty in the nose and throat surgical wards. It seemed that fully half of the uncomplicated septum and tonsil operations were being followed in one or two days by a sudden rise of temperature associated with sore throat, or occasionally an erysipelas, sinus or ear infection. From these infections the same type of hemolytic streptococcus was recovered as found in the general surgical wards.

So serious had the situation become in the surgical service that all operations, except emergencies, were suspended, in order to investigate the cause and ascertain the means of control of the too frequent surgical complications caused by the hemolytic streptococcus. This investigation disclosed that there was a true epidemic of streptococcic sore throat in several of the wards of the hospital. The distribution of the cases was distinctinctly localized in wards which were related either to the primary acute throat wards or to the surgical wards, these being more particularly the influenza wards to which acute throat patients were sometimes admitted on undetermined diagnoses, and convalescent surgical wards fed from the surgical wards in which the epidemic was first recognized. In one convalescent surgical ward of about thirty patients, six new cases were found at one evening inspection, all presenting a rather serious condition with symptoms very suggestive of an outbreak of influenza, all of which patients later developed very severe and typical throats. In addition to these ward epidemics, several cases developed among the hospital corpsmen, both from the infected wards and from other wards, the latter being evident contacts with the former in the corpsmen quarters and tending to spread the epidemic over the entire hospital.

SYMPTOMS

The subjective symptoms of the most typical cases at the height of the epidemic were quite constant and severe. As accurately as could be determined, the period of incubation was two or three days, this judgment being based on the earliest cases developing in new men entering the hospital. Usually there were prodromal symptoms a few hours before the acute onset of the fever. These were an indefinite feeling of malaise and a loss of appetite, for which a laxative frequently was requested. The temperature was taken without showing any rise. Frequently during this period a beginning localization in the throat was noted —a slight dryness and soreness. The onset of fever was sudden and accompanied by alternating warm and chilly sensations, sometimes a distinct chill, dizziness, prostration, very severe frontal headache, a slight stiffness and soreness of the neck, and mild back, muscle and joint aching. Thus far the onset was typical only of the onset of any severe acute infectious disease, and particularly liable to be confused with influenza during an epidemic.

Within twelve hours, however, localizing symptoms appeared that clearly differentiated the disease from influenza. The throat became very sore so that swallowing was painful and there was a tendency to expectoration of mucus and saliva. Occasionally this sputum was blood-stained from pharyngeal hemorrhages. Very soon after the development of the throat symptoms, within one or two days from the onset, the systemic symptoms largely disappeared, with a coincident drop in the temperature, so that the patient felt fairly comfortable except for the fact that the throat remained very sore and swollen.

The objective localizing symptoms related entirely to the pharyngeal lesion. At the onset the throat was not characteristic. There was a general vascular injection of the lateral and posterior pharyngeal walls, sometimes described as a beefy red throat, with not much swelling or exudate. This condition gave the dry, slightly sore feeling noted, and can be found in the onset of almost every acute infectious disease. The tenderness at onset was usually more noticeable than in the onset of influenza, thus indicating early the site of the characteristic local lesion. Very rapidly, within twelve to twenty-four hours, this local lesion appeared. It consisted of a swollen, very dark red, lateral, pharyngeal and tonsillar region, with a beginning thin, grayish-white, slimy exudate over the crypts of the tonsils. In the absence or the fibrotic condition of the tonsils, the lymphoid tissue of the lateral, posterior and nasopharyngeal walls was involved, with less evident exudate. All grades of local lesion were present, from a simple injected pharynx with rapid return to normal, to an extremely swollen and painful condition of the tonsils, covered over entirely with a slimy, grayish membrane suggesting diphtheria, or the crypts and supratonsillar fossa may form foci of ulceration sometimes coalescing into large ulcers covered with a dirty, yellowish-white membrane very similar to the so-called Vincent's angina.

CLINICAL CHART AND BLOOD PICTURE

The temperature curve is not especially characteristic. In typical severe cases it mounts from normal to 104 F. within an hour or two, remaining high one or two days and returning to normal within a similar period. The recovery from systemic symptoms is even more rapid than the drop in the temperature, thus differentiating the disease from influenza. Another feature quite characteristic of this epidemic streptococcic sore throat is the frequent relapse or recurrence of symptoms and fever, occasionally two or more times, at intervals of from two to five days.

The leukocyte count is generally above normal, between 10,000 and 15,000. This is a valuable point of differentiation from influenza at the onset, for in influenza there is almost constantly a distinct leukopenia. However, this rule of differentiation is not absolute, for occasionally at the onset of toxic symptoms of streptococcic sore throat there is a distinct leukopenia, total leukocyte counts as low as 4,000 being obtained. This is quickly followed by the characteristic moderate leukocytosis with no significant variation of the differential count from normal. This primary leukopenia may be of more constant occurrence than is disclosed by routine leukocyte counts on these patients, for it is rare to obtain a count before the secondary throat lesion is well advanced. The interpretation of this initial leukopenia is that it represents a bacterial anaphylactic reaction from the increasing local or general destruction of streptococci. The primary symptoms of onset are indistinguishable from those of a great number of acute infectious diseases. The specific and characteristic reaction of streptococcic sore throat, as of all acute infectious diseases, is dependent on the nature and site of the local process developing subsequent to and as a result of the primary bacterial anaphylactic reaction. In streptococcic sore throat the secondary lesion is located in the pharyngeal and tonsillar lymphoid tissue. The primary site of invasion is in all probability in the same region.

BACTERIOLOGIC FINDINGS

The hemolytic streptococcus constantly recovered, almost in pure culture from these sore throats, and in pure culture from the surgical infections under discussion, had definite unusual cultural characteristics. The colonies on the surface of blood agar (10 per cent. defibrinated sheep's blood in plain agar) were large and moist, having the clear appearance of a drop of water, or with a slightly opaque or cloudy center as drying proceeded. The hemolysis was not marked, nor was there a sharply defined outer border, this extending very little beyond the outer border of the colony at the end of twenty-four hours' growth. In the first culture from two or three cases of wound infection and from a few very severe throats there was little or no hemolysis at the end of twenty-four hours, the growth appearing merely as perfectly clear droplets of water with a tendency to confluence. Longer growth and subcultures from these showed a more distinct hemolysis and less moist colonies. On drying, these moist colonies flattened out to a thin layer on the surface of the blood agar, sometimes showing radial lines or concentric rings.

Cultures in glucose bouillon gave at first a uniform turbidity, but within forty-eight hours there was noted a tendency of the growth to accumulate at the sides and bottom of the test tube, with final settling and partial clearing of the supernatant fluid.

Smears from the throat showed numerous pus cells and flattened or spherical gram-positive diplococci with few chains of more than two or three diplococci. Capsule stain gave a suggestion of a narrow capsule, but not more than can be obtained on numerous organisms in an albuminous exudate. Smears from the moist colonies on blood agar showed large spheric, gram-positive diplococci in short chains. The capsule stain gave no definite capsule, but a wide albuminous envelop of greater density near the diplococcus. In bouillon cultures, short chains were formed. These streptococci were not soluble in bile, and did not ferment inulin or mannite in Hiss' serum water mediums. They gave a distinct acid reaction in glucose, maltose and galactose, a slightly acid reaction in lactose, and a questionably acid reaction in saccharose and dextrin. Coagulation occurred in none of the tubes after ten days' growth. They differed from the ordinary *Streptococcus pyogenes* and the lung streptococci only in cultural characteristics, the latter growing in smaller, dry, white, granular colonies on blood agar, and in bouillon as a flocculent sediment forming long chains.

This description of the hemolytic streptococcus found in this epidemic of sore throat appears to agree in every way with that of the writers previously referred to in studies of earlier epidemics.

In several cases of streptococcic sort throat developing in the hospital, throat cultures were taken the day preceding the onset of toxic symptoms, with negative results for hemolytic streptococci. In a few cases, throat cultures taken at the onset of symptoms were negative, with typical positive cultures obtained on succeeding days. One case in particular deserves special description to indicate the possibility of typical toxic symptoms and positive throat culture but with negative throat symptoms:

A routine throat culture of a convalescent patient ready to go to duty was taken, March 3, and was negative for hemolytic streptococci. On the evening of March 4, he felt a little indisposed, with no rise of temperature. The following morning at 8 o'clock he felt distinctly ill, with slight headache; but the temperature was still normal. At 10 a. m. he had a sudden, fairly severe chill, with sweating, prostration and very severe frontal headache, but no other aches nor pains and no discomfort nor symptoms in the nose or throat. The pharyngeal wall appeared injected, but there was no exudate. A few blood clots were blown out of the nose. The temperature by noon was 104 F.; leukocyte count, 5,000. Throat culture taken in the afternoon gave a pure growth of the characteristic moist hemolytic streptococcus. At no time was there any throat pain or discomfort, or any exudate. A mild relapse occurred four days later.

Blood cultures were taken in ten cases at various periods of the infection from the onset to five days following, with negative results. It is well established, however, from previous, more severe epidemics, that there is frequently, if not constantly, a blood invasion by the streptococci from the throat. Clinically this has been evidenced by the complications, such as arthritis, endocarditis, purpura and spontaneous peritonitis, that have occurred in cases. Thus in 173 typical cases of the Chicago epidemic,[5] there were seventeen cases of arthritis, three of purpura, five cases of endocarditis, and nine cases of idiopathic peritonitis. Davis and Rosenow[3] state that blood cultures are almost always negative when glandular enlargement is pronounced, but that streptococci may be recovered at the outset of such cases. Also, it has been noted by numerous writers that visceral complications occur most often in the group of cases that have little or no glandular involvement but marked constitutional disturbance.

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[5] Capps, J. A., and Miller, J. L. (Footnote 3).

The evidence of a bacteremia in the cases of the Naval Hospital epidemic, although not furnished by blood cultures, could hardly be more strikingly indicated than by the frequent deep infection of the traumatized tissue of abdominal surgical wounds with the characteristic hemolytic streptococcus, following a similar throat infection of often very mild character.

COMPLICATIONS

The chief and almost constant complication of this epidemic of streptococcic sore throat was tenderness and swelling of the submaxillary and cervical lymph glands. There was no case of suppuration except a peritonsillar abscess in a considerable number of cases. Middle ear and mastoid infection occurred as a direct sequel in six cases, a facial erysipelas in three. An acute arthritis of mild type with no suppuration was present in a few cases.

Relapses, with fever and typical throat lesion, were quite common; in fact, almost characteristic of this disease. They occurred usually three or four days after the complete subsidence of fever and of local symptoms, although positive throat cultures remained.

Deep infection of the surgical wounds was the most alarming complication. This has been discussed in preceding paragraphs.

A most noteworthy feature of the complications was the entire absence of any symptoms of bronchitis or bronchopneumonia in over 100 cases observed. There seemed to be no tendency of the infection to extend below the pharynx, even hoarseness rarely occurring. This fact is significant on account of the frequent statement and the general impression that streptococcus bronchitis and bronchopneumonia begin as a throat infection. At the same time that these cases of streptococcic sore throat were being studied, typical cases of streptococcus bronchitis and bronchopneumonia were being received in the pneumonia wards and almost universally gave a negative history and negative physical findings of a primary throat lesion, the only history obtained being a slight dry or sore feeling usually attributed to coughing. These facts indicate a distinct property of specific primary localization of strains of the hemolytic streptococcus, differentiated with difficulty by cultural or morphologic characteristics, in the one case in the throat with complications related to the adjoining sinuses and lymph glands, in the other case in the bronchi with complications related to the lungs and pleura.

Culturally, morphologically, and by the fermentation reactions these two types of streptococci can be differentiated only by the peculiar moist appearance of the blood agar colonies of the throat streptococci during an epidemic of sore throat. The same characteristics are present to some extent with the lung streptococci in primary cultures, these showing large, moist colonies and the formation of capsular substance in tissue mediums. These particular cultural qualities have been recognized by many writers in relation to these and other pathogenic micro-organisms and have been interpreted as indicating a heightened virulence of the micro-organism, produced by rapid transmission from animal to animal. In repeated subcultures, neither the throat streptococcus nor the lung streptococcus can be differentiated from the ordinary *Streptococcus pyogenes*. Immunity reactions in the hands of other investigators have been little more instructive. However, the distinct characteristics of unusual infectiveness and of specific primary localization of the epidemic throat streptococci and of the epidemic bronchopneumonia streptococci indicate fundamental principles controlling acute infectious diseases.

EPIDEMIOLOGY

From the preceding description I do not believe there can be any doubt that this epidemic of sore throat was identical clinically, pathologically and bacteriologically with the streptococcic sore throat epidemics of 1911 and 1912 in Boston, Chicago and Baltimore. On account of the generally accepted idea that milk contamination was the chief, if not the only, source of infection in these and similar epidemics in the past, it is necessary to analyze the situation at the U. S. Naval Hospital for the possibility of such a source.

The milk supply to the Naval Hospital during the epidemic has been from the Hood's dairy, which supplies all parts of Boston and adjoining cities and is one of the largest and most modern in this section of the country. The milk received at the Naval Hospital is issued to every ward and given to all patients. There are twenty-seven wards averaging thirty beds each, making the census of the hospital about 800. A milk-borne infection would be expected to appear simultaneously in every ward, but this was not the case. The first wards infected were the nose and throat surgical wards and the general surgical wards, all situated in the main permanent brick building. The infection in the nose and throat wards really preceded that in the general surgical wards. The second focus of infection was in the throat infectious wards into which throat patients were entering from the outside and were being transferred from the surgical wards. The next wards infected were the influenza wards, which frequently received early throat cases with undetermined diagnoses, and the convalescent surgical wards, recruiting from the infected surgical wards. All other wards in the hospital were free from throat infection at this time, three weeks after the onset of the epidemic, during which time more than fifty recognized cases had developed. Among these were several hospital corpsmen on duty in the infected wards. From them the epidemic spread to the corpsmen quarters, and from this focus of infection cases began to appear, one or two at a time, in various wards throughout the hospital, and is continuing at the present time in this manner. Several physicians and nurses have contracted the disease.

This manner of spread of the infection indicates contact infection and strongly opposes the idea of milk as the carrier in this epidemic. Cultures of the milk revealed no hemolytic streptococci. The simplest and least artificial explanation of the spread of such an epidemic disease is by contact with infected cases. This is supported by the experimental transmission of the characteristic streptococcic sore throat to volunteers during experiments in the transmission of influenza conducted by the Navy and the Public Health

Departments at Gallops Island, Boston Harbor. This was effected by the direct transfer of throat exudate from patient to volunteer.

The factors determining the infectiveness of a microorganism in an acute infectious disease are very poorly understood, but it is certain that the mere presence of the hemolytic streptococcus in the throat does not necessarily mean that the case is infective. The infectiveness or virulence in epidemic disease is more probably determined by a combination of anaphylatoxin and pathogenic micro-organisms in the droplet or other vehicle of transmission, to make possible the infection from such a small quantity of material. This has recently been emphasized by Rous, Robertson and Oliver,[6] who found, in trying to develop an antipneumococcus serum in dogs by using an infected tissue antigen, that dogs, although quite resistant to pneumococcus broth cultures extremely virulent to mice, succumbed to a very small amount of tissue or blood from a rabbit in the terminal stages of pneumococcus septicemia.

An analysis of the evidence brought forth in 1911-1912, generally accepted as proving that epidemic streptococcic sore throat is milk-borne, shows that the conclusions were considerably overdrawn and have excluded a considerable amount of evidence which would indicate otherwise. For example, in the Boston epidemic,[1] although circumstantial evidence of milk transmission is fairly conclusive in regard to the epidemics of Back Bay and Cambridge, it is less conclusive in regard to the epidemic of Brookline, and fails completely to explain the epidemics in Hudson, Marlboro and Southboro. Thobald Smith,[7] in a later analysis of seven small epidemics in the region of Boston and investigation of the milk supply supposed to have caused these epidemics, recovered in only one instance in milk a streptococcus comparable to those found in the epidemic, and this from the three normal udders of a cow that had one infected udder. In Chicago,[5] the epidemiologic evidence was more complete, yet milk contamination does not explain satistorily the increase of virulence of a common microorganism until it is capable of causing severe anaphylactic symptoms and metastatic invasion in the human body. This increase of virulence must have been effected by rapid repeated human transmission, and is hardly conceivable by any form of mastitis in the cow, which would tend to decrease the virulence of a microorganism as specific in its manifestations as the hemolytic streptococcus of epidemic sore throat. The evidence of milk contamination in the Baltimore epidemic[4] was very meager, hardly more than a supposition seized on by public health authorities to pacify an agitated public.

A complete explanation of the epidemiology of this disease is still lacking. Milk contaminated by an acute case on the morning of its distribution may be a contributing source of some localized epidemics, but the burden of proof certainly rests with those who would be satisfied with this explanation of all epidemics. The claim that such a common carrier as milk or water is necessary to explain the explosive nature of such outbreaks of epidemic disease is reasoning from an unestablished premise and is less easily accepted since our recent experience with influenza. The means of rapid spread in a community of a virus which has become extremely infective are so manifold by direct contact of individuals in present day society that it is rarely possible to have any idea of the source of infection from such ambulatory diseases as influenza and streptococcic sore throat.

MEANS OF CONTROL

An epidemic infection of streptococcic sore throat in surgical wards, with metastatic invasion of operation wounds, becomes a much more serious and urgent problem for control than an epidemic of sore throat in a civil community. Immediately on recognition of the serious surgical condition present, all operating, excepting emergency cases, was discontinued and a survey of the surgical wards was made to discover acute cases and carriers of the hemolytic streptococcus, particularly the moist or mucoid hemolytic streptococcus characteristic of this epidemic sore throat. An occasional case of sore throat had been noted previously in the nurses and corpsmen on duty in the surgical wards, for which they had been off duty a day or two, or in some cases not at all. In the surgical wards, numerous carriers of the characteristic moist hemolytic streptocuccus were found; for example, in one ward there were five carriers among two nurses and seven corpsmen, with three additional carriers of the ordinary hemolytic *Streptococcus pyogenes*.

These carriers of hemolytic streptococci were all removed from the surgical service; all throats were observed frequently, and cultures were taken on the least complaint or on the appearance of physical signs. When a new throat case developed among the patients in the wards, the patient was immediately isolated and removed from the ward, if possible. A so-called clean ward was established and most carefully controlled, including all new cases entering the hospital for operation.

After about three weeks' discontinuance of operating, work was resumed again, the control of physicians, nurses, corpsmen and patients for hemolytic streptococci being, however, continued. For a time operations were not performed on any patient showing hemolytic streptococci in the throat on entrance. Later this rule included only those showing the moist colonies. No more postoperative streptococcus infections have occurred, although there are still occasional cases of this characteristic streptococcic sore throat occurring in corpsmen and patients throughout the hospital. Also many new cases have been admitted to the throat wards from outside stations, which shows that the infection is widely spread over the district.

CONCLUSIONS

1. An epidemic of hemolytic streptococcic sore throat has prevailed during February, 1919, at the U. S. Naval Hospital, Chelsea, Mass.

2. This epidemic infection has been comparable in clinical, pathologic and bacteriologic findings with the epidemics of streptococcic sore throat reported in Boston, Chicago and Baltimore in 1911 and 1912.

3. Attention was first called to the presence of an epidemic at the Naval Hospital by the numerous instances of postoperative rise in temperatures in surgical cases, associated with sore throat, and subsequent infection of the primarily clean surgical wounds with a peculiar hemolytic streptococcus.

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6. Rous, Peyton; Robertson, O. H., and Oliver, J.: Experiments on the Production of Specific Antisera for Infections of Unknown Cause, I, Type Experiments with Known Antigen, J. Exper. M. **29**: 283, 1919.

7. Smith, Theobald, and Brown, J. H.: A Study of Streptococci Isolated from Certain Presumably Milk-Borne Epidemics of Tonsillitis, J. M. Res. **21**: 455, 1914.

4. The symptoms of onset of the sore throat were characteristic of acute bacterial anaphylaxis—sudden chilliness, dizziness, fever, headache, backache, general aching and prostration, with occasionally an initial leukopenia.

5. The secondary symptoms localized in the tonsils or lateral pharyngeal walls, with complications referable to the submaxillary and deep cervical lymph glands, the nasal sinuses, the middle ear and mastoid, the face, and by metastatic infection to the surgical wounds and the joints. In no case was there a complicating bronchitis or bronchopneumonia. This stage of the disease was constantly associated with a moderate leukocytosis.

6. The micro-organism constantly recovered in almost pure culture from the throat and the infected wounds was a hemolytic streptococcus, growing in large, moist, droplet-like colonies on blood agar mediums.

7. The hospital epidemic originated in the nose and throat surgical wards, from which it spread by contact to other wards. There was practically no possibility of spread by milk contamination.

8. Control of the epidemic was effected by suspension of all operating for a period of three weeks, immediate isolation of all acute throat cases, and elimination from the surgical service of all carriers of hemolytic streptococci.

AN OLD TIME VICTIM OF AMETROPIA AND A MODERN INSTANCE

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There are numerous references in general literature to instances in which eye affections have hampered distinguished persons in the performance of their labors. Most of these references are to be found in biographies, but, so far as I know, there are few instances of the person afflicted having written an account of his symptoms that would enable an oculist to make a diagnosis, and to prescribe with a reasonable degree of accuracy the remedy that would have restored the patient's eyes to usefulness.

The most interesting case of this kind is in Samuel Pepys' famous Diary. It is generally known that this unique document came to a premature end when its author was but 36 years old, and that the cause that forced him to give up this work was that his eyes gave out completely for close work. But it is known only to attentive readers of the Diary that so detailed is the description of his symptoms that a diagnosis can be made and a good guess ventured as to the remedy that would have enabled him to continue his work.

The story of Pepys' sufferings, as recorded in the Diary, has been so well edited by Mr. D'Arcy Power that I shall quote freely from his article published in Volume I of "Occasional Papers Read by Members of the Samuel Pepys Club, 1903-14." Indeed I have found it quite necessary to make use of Mr. Power's quotations, for a number of them are not contained in my ten volume edition of the Diary, published by Dodd-Mead and Company, 1889.

The first record of any complaint about his eyes is made by Mr. Pepys on Jan. 19, 1663-1664, when he was nearly 30 years old, and had been rather worried by an unreasonable jealousy of his wife. He writes: "I to my office till very late, and be in pain which I never felt to now-adays, which I impute to sitting up late writing and reading by candle-light." Again, on April 1, 1664, he complains: "This day Mrs. Turner did lend me a manuscript of one Mr. Wells, writ long ago, teaching the method of building a ship, which pleases me mightily. I was at it tonight, but durst not stay long at it, I being come to have a great pain and water in my eyes after candle-light." On May 4: "So home to dinner, and after dinner to my office very late till my eyes (which begin to fail me now-adays by candle-light) begin to trouble me." And on the following day: " . . . to the office . . . and thence betimes home. my eyes beginning every day to grow less and less able to bear long reading or writing, though it be by daylight; which I never observed till now." On Oct. 5, 1664, he set about getting some assistance for his sight, for, " . . . then comes Mr, Croker to see me, and I discoursed with him about his writing and ability of sight and how I shall do to get some glasses or other to help my eyes by candle-light; and he tells me he will bringe the helps he hath within a day or two, and show me what he do."

On October 11, there is a memorandum to the effect that: "I had taken my Journal during the fire and the disturbing following in loose papers until this very day, and could not get time to enter them in my book till January 18, in the morning, having made my eyes sore by frequent attempts this winter to do it." On Dec. 13, 1666: " . . . for these three or four days I perceive my overworking of my eyes by candle-light do hurt them as it did last winter, that by day I am well and do get them right, but then after candle-light they begin to be sore and run, so that I intend to get some green spectacles." Three days later: " . . . home by water, and to supper and to read and so to bed, my eyes being better today, and I can not impute it to anything but my being much in the dark tonight, for I plainly find that it is only excess of light that makes my eyes sore." On Christmas eve, he writes: "I do truly find that I have overwrought my eyes, so that now they are become weak and apt to be tired, and all excess of light makes them sore, so that to candle-light I am forced to sit by," adding, "the snow upon the ground all day, my eyes are very bad, and will be worse if not helped, so my Lord Bruncker do advise as a certain cure to use greene spectacles, which I do." Later on the same day: "I this evening did buy me a pair. of green spectacles, to see whether they will help my eyes or no. . . . Then home, to my office, and did business till my eyes began to be bad and so home to supper." On New Year's eve he was busy with his accounts, "till my eyes became very sore and ill, and then did give over, and supper and to bed."

Pepys does not again complain of his eyes until April 12, 1667, when: "I close my office all the afternoon getting off of hand my papers which, by the late hollidays and my laziness were grown too many upon my hands, to my great trouble. and therefore at it as late as my eyes would give me leave." April 22: " . . . did business till my eyes were sore again, so home to sing, and to bed, my eyes failing me mightily."

Aug. 3, 1667: " . . . my eyes began to fail me, which now upon very little overworking them they do, which grieves me much." Sunday, August 4: "Busy at my office from morning till night in writing with my own hand fair our large general account of the expense and debt of the Navy, which lasted me until night to do, that I was almost blind." August 19: "I home to supper and to read a little (which I cannot refrain, although I have every reason in the world to favour my eyes, which every day grow worse and worse, by overusing them.") Sept. 4: "At business till twelve at night writing in short hand the draught of a report to make to the King and Council tomorrow. . . . This did finish tonight to the spoiling of my eyes I fear." The next day: "My eyes so bad since last night's straining of them that I am hardly able to see, besides the pain which I have in them."

At the beginning of this winter Pepys took some trouble to get his defective sight improved, for on November 4: "I took a coach and went to Turlington. the great spectacle maker, for advice, who disuades me from using old spectacles. but rather young ones, and so tell me that nothing can wrong my eyes more than for me to use reading glasses which do magnify much." Mr. Turlington's advice was superlatively wrong, for he was clearly recommending Pepys to use concave glasses when in reality he needed convex ones. It is probable that the spectacles were tried and found unsuitable, for he never bought them, and on the 14th, he writes: "So home to supper and to bed, my eyes being bad again; and by this means the nights nowadays do become very long to me, longer than I can sleep out." In his survey of April, 1668, he says that he is in "some trouble for my friends . . . and more for my eyes, which are daily worse and worse that I dare not read almost anything."

We read no more about the state of Mr. Pepys' eyes for the next six months, until June 20, 1668, when there is an entry: "So we home and there able to do nothing by candlelight, my eyes being now constantly so bad that I must take present advice or be blind. So to supper and to bed." His eyes must have been more than usually painful at this time, for on June 29, nine days later, he writes: " . . . towards St. James', and I stop at Dr. Turberville's and there did receive a direction for some physic, and also a glass of something to drop in my eyes; who gives me hopes that I may do well." On the following day: "Supper about eleven at night; and so after supper, parted, and to bed, my eyes bad, but not worse, only weary with working. But, however, I very melancholy under the fact of my eyes being spoiled and not recovered; for I am come to that I am not able to read out a small letter, and yet my sight good for a little while I can read, as ever they were I think." On July 13: "This morning I was let blood, and did bleed about fourteen ounces, towards curing my eyes." July 31: "The month ends mighty sad with me, my eyes being now past all use almost; and I am mighty hot upon trying the late printed experiment of paper tubes." His eyes were so bad at this time that he made his boy (August 2) "read to me several things, being unable nowadays to read myself anything above two lines together, but my eyes grow weary." August 11 " . . . at the office all the afternoon till night, being mightily pleased with a little trial I have made of the use of a tube-spectacal of paper, tried with my right eye." The result of the trial must have been satisfactory, for on the 12th he went to the play and saw "Macbeth," and "then home, where the women went to making my tubes." But the improvement was not long maintained, as on the 15th: "So home and to my business at the office my eyes bad again, and so to bed."

Feb. 16, 1668-1669: " . . . my eyes mighty bad with the light of the candles last night, which was so great as to make my eyes sore all this day, and do teach me a manifest experiment that it is only too much light that do make my eyes sore. Nevertheless, with the help of my tube and being desirous of easing my mind of five or six days journal, I did venture to write it down from ever since this day se'nnight, and think that without hurting my eyes any more than they were before, which was very much, and so home to supper and to bed . . . ." Even at the play house in a good place among the ladies of honour he "was in mighty pain to defend myself from the light of the candles."

From his thirty-sixth birthday onwards the complaints about his eyes become even more frequent and always in the same strain . . . and they were so painful on many occasions that he was obliged to curtail even his play-going.

Some extra work that he did the latter part of March led him to make another attempt to get relief, for on April 29: "Up and to my office awhile and thither comes Lead with my vizard, with a tube fastened within both eyes; which with the help which he prompts me to, of a glass in the tube, do content me mightily, and then . . . he being gone, to write down my journal for the last twelve days; and did it with the help of my vizard, the tube being fixed to it, and do find it mighty manageable, but how helpful to my eyes this trial will show me."

Pepys had the tubes altered with his usual ingenuity, for on May 8, 1669: "Up to the office and there comes Lead to me and at last my vizards are done and the glasses got to put in and out as I will; and I think that I have brought it to the utmost, both for easiness of using and benefit, that I can; so I paid him 15s. for what he hath done now last in finishing them, and they I hope will do me a great deal of ease. At the office all this morning and this day the first time did altar my side of the table after eight years sitting on that next the fire. But now I am not able to bear the light of the windows in my eyes . . . ."

The vizard and the change of position proved of small use, however, for on May 16, 1669: "Dined at home . . . and I all the afternoon drawing up a foul draught of my petition the Duke of York about my eyes for leave to spend three or four months out of the office, drawing so as to give occasion to a voyage abroad, which I did to my pretty good liking."

Having obtained his leave, he spent the remaining days of the month in making preparations for the holiday, and the Diary ends on May 31, 1669.

> And thus ends all that I doubt I shall ever be able to do with my own eyes in the keeping of my Journal, I being not able to do it any longer, having done it now so long as to undo my eyes almost every time that I take a pen in my hand; and therefore what ever comes of it I must forbear; and therefore resolve, from this time forward, to have it kept by my people in long-hand, and must therefore be contented to set down no more than is fit for them and all the world to know; or, if there be anything, which cannot be much now my amours to Deb. are past and my eyes hindering me almost all other pleasures. I must endeavor to keep a margin in my book open, to add here and there a note in shorthand with my own hand. And so I betake myself to that course which is almost as much as to see myself go into my grave; for which and all the discomforts that will accompany my being blind, the good God prepare me.

This pathetic renunciation was written just two hundred and fifty years ago. To the oculist of today it is clearly evident that Pepys' dread of blindness was unfounded, as he discovered in the course of his long life. Had his sufferings been due to simple hypermetropia it is pretty certain that in the many trials of glasses that he made, some lens should have corrected this defect and relieved his asthenopia, but no such relief is recorded. Therefore, it is logical to conclude that an additional astigmatic error was responsible for the continuance of the trouble. As astigmatism was not known until nearly two hundred years later, poor Pepys' case was quite hopeless and he had to give up his Diary. Thus it happened that an error of refraction deprived the world of an untold number of literary and historical contributions that would have been of inestimable value.

Mr. Power, after consulting with some of his confrères, comes to the conclusion that the lenses that would have corrected Pepys' ametropia are, +2 D. sph+0.50 D. cyl, ax 90. These lenses he had ground and mounted in a silver spectacle frame modeled on one that came to America in the *Mayflower* in 1620.

Now two hundred and odd years later comes a "modern instance." In August, 1893, Mr. J. R. from Boston consulted me regarding an asthenopia of long standing. He gave the following history: His eyes had given him trouble from the time that he started in school. At first he was troubled only when using them by artificial light, but they gradually grew worse until at times he was unable to study even by daylight. He had severe eye pains and headaches and had to be taken out of school two or three times a year. The work of preparing for college entrance examinations completely prostrated him, and he was sent to recuperate in Europe for six months. The profession that he had chosen was civil engineering, and he had set his heart on entering the Massachusetts

Institute of Technology, before his nineteenth year. As he had already lost over one year in preparatory school, this additional setback was a great disappointment.

When his eyes began to trouble him he was taken to an oculist who prescribed glasses and advised complete rest from close work. While in Europe, he saw an oculist who prescribed stronger glasses and told him to engage in some business that would not require hard work with his eyes.

Much improved by rest and change of climate, he returned to Boston and commenced the study of civil engineering. His eyes soon began to give him trouble and in two months he was obliged to take another rest. He managed, however, to get through the first year, and after three months' vacation in France, he started on his second year, soon broke down, and finally renounced his cherished ambition of becoming an engineer. His father was a merchant, and although Mr. R. disliked a commercial career, he was obliged to go into business and for the last ten years has been at the head of his father's establishment. But, he has never been able to use his eyes for close work.

When I read Mr. Power's interesting article, Mr. R.'s case came vividly to my mind. For not only were the symptoms and the error of refraction in both cases much alike, but the circumstances that in both instances prevented a proper correction of the ametropia were analogous and the final renunciations were the direct outcome of these circumstances.

Mr. R. had 2 diopters of hypermetropia in each eye and was wearing for distance +2 D. sph, with which his vision was 20/20 —. For reading he was wearing +2.75 D. When in the process of testing his eyes, having found that I could not improve on his +2 D. with any spherical lenses, I started to try cylindrical lenses, Mr. R. remarked that cylinders had been tried before, but that he never had been able to see so well with them. As it turned out +0.50 cyl did make matters worse, but +0.25 cyl added to the +2 D. sph, R. E. ax 120, L. E. ax 45, brought the vision up to full 20/20.

The last test that Mr. R. had for distance glasses was made in 1871 or 1872, and as at that time the test cases contained no quarter diopter cylinders, his astigmatism was not discovered, and consequently his asthenopia continued unabated. Why, when he was tested for reading glasses in 1889, the error was not detected I can not understand, for there was no uncertainty about the improvement in vision when the cylinder was put in place.

I did not see Mr. R. after my work was finished, but two months later I received a letter from him in which, after informing me that he was using his eyes with perfect comfort and that he spent his evenings "devouring" books that he had been unable to read in the past, he ended his letter with this sentence: "It is truly tantalizing to realize at my age that my life has been ruined and all my ambitions shattered by an astigmatic error of a quarter of a diopter."

Destroying the Fly.—As 99 per cent. of flies are bred in horse manure, the proper care of horse stables means fly extinction. Although the house-fly is the chief carrier of typhoid germs, the little fruit-fly, genus *Drosophila*, which usually breeds in overripe or decaying fruit may breed in human excrement and therefore should be guarded against.—U. S. Department of Agriculture. Farmers' Bulletin, No. 153, Washington, 1908, p. 16.

NARCOTIC DRUG ADDICTION AS REGULATED BY A STATE DEPARTMENT OF HEALTH

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By an act of the Pennsylvania General Assembly, session of 1917, concurrently with the United States Congress, the Harrison Narcotic Law, to all intents and purposes, was placed on the statute books of the commonwealth. Under the police power of the state, the department of health regulates the possession, etc., of certain narcotic drugs now under the control of the United States Bureau of Internal Revenue as relates to interstate commerce. But special provisos in the Pennsylvania act make it unlawful to supply the named drugs in any quantity whatsoever to known habitual users thereof, except in pursuance of a prescription of a duly licensed physician or dentist, and physicians may, under proper regulations, and after a physical examination of an addict and a report in writing, take addicts under treatment, in good faith, for the purpose of curing the habit, and not merely for the purpose of satisfying a craving for the drug.

Section 5 of the Pennsylvania act prohibits administration of these drugs to any person except under the advice and direction, and with the consent, of a duly licensed physician or dentist; but a dentist may not treat an addict.

Records must be kept of administration except in an emergency case. Inspections and reports are provided for, as directed by the commissioner of health. Licenses of physicians and others may be suspended and revoked on conviction of violation of the act or for being a drug addict. Veterinarians may not supply the named drugs for the use of a human being, but may administer them to an animal which has been regularly examined and is under their care.

The commissioner of health was authorized to establish, in the department of health, a bureau or division for the purpose of enforcing the provisions of the act, to require reports to the bureau, and, under the powers conferred on him, to issue rulings and orders necessary for enforcement.

Under the provisions of the act, the bureau of drug control has been created, and, by means of monthly reports covering all purchases of narcotics by physicians and other professional persons, statements from all registered retail druggists of every prescription carrying material quantities of narcotic drugs and giving the names of the patients and physicians, registration of addicts, inspections, police investigations, detective work, and a clinical study of addicts themselves—all followed up intensively in a "This Means You" campaign—is accumulating dependable data which justify some comment.

From the pharmacologic point of view, physicians commonly fail to differentiate between narcotism and narcosis. Narcotism is stupor due to narcotics, while narcosis is the aggregate of influence or effect from continued use of narcotic substances. The latter constitutes a syndrome, a more or less permanent toxication, which is relieved only by renewed intoxicating doses of the enslaving drug, which, in turn, continue the narcosis or toxication, and so on indefinitely. While drug addiction may be considered as a vice, a disease, a habit; while it may be viewed sociologically, criminologically or psychically, it is, at base, a prolonged toxication. The other matters are incidental, serious though they may be.

Many physicians who have chronic or painful conditions to meet in practice, and who prescribe narcotics for relief, do not seem to realize the danger of addiction, and the fact that the final state of the addict with disease is more aggravated than if narcotics were never prescribed or were used most sparingly. The result is that about one half of the addicts reported to us are diseased persons. We consider them victims of poor therapeutics.

Sporadic, half-way measures of repression are a failure, for commercial effort steps in and offsets all the good done, and peddling of drugs, "underground traffic," and illicit professional use become aggravated by such measures. Only by a sustained and every-day effort, constantly followed up, is good accomplished. General propaganda, while useful incidentally, does not reach the persons involved, and serves only to attract attention to evils that are soon forgotten unless it is the daily business of certain capable people to ferret them out.

We find it necessary to give as much attention to the village as to the large city, for we find that, as to relative population, there is more free and unrestrained addiction in the small places than in the large cities. The larger number of our bad reports come from communities of from 3,000 to 30,000 population, many of them within easy reach of large centers of population. But this statement must be qualified by the further one that in the slums and vice districts of the cities may be found the largest pro-rata indulgence in drugs, although the vicious population is relatively small, even in the larger places. Furthermore, the federal authorities, and some city police departments—by no means all of them—exercise a large measure of control in the cities, while the addicts in small places, and outsiders going there for supplies, have rather free rein.

SOURCES OF SUPPLY

So far as we have been able to ascertain, prescriptions by physicians constitute the main source of supply by addicts, that is, taking the state at large. Much of this catering to the addict is unconscious on the part of the average physician, for there is always a plausible excuse offered, and the physician is unaware of the fact, as shown by our records, that most of these addicts visit several physicians. When we inform the physicians by mail of the facts in the cases, most of them are astonished; they have yet to learn the psychology of the addict. Then, there are many physicians of ready sympathy who think that the laws are oppressive and who forget that addicts lie; these physicians are exploited most shamelessly.

Smuggling is probably the next largest source of supply; but of this matter we have little exact knowledge, since its elimination lies within the province of the federal authorities.

Physicians prescribe narcotics for plausible strangers, who get the prescriptions filled, and it is common to find forgeries presented soon after. Many forged prescriptions are collected in our work. Recently, at our instance, a woman was arrested for forging twenty-six prescriptions and thus illegally coming into possession of narcotics; and yet five physicians were writing prescriptions for her. Two of them wrote on scraps of paper with pencil. These she found easy to be forged.

Some forgers steal pads of prescription blanks from physicians and druggists; sometimes they steal the drugs themselves, or get confederates to do so. We apprehended two of these men, but had to release them because the physicians would not appear against them. Such tactics simply encourage such thefts and discourage the police. Many physicians write prescriptions so illegibly that they cannot themselves tell the genuine from the forgeries.

Some physicians order their drugs from supply houses that shade the price and sell short weight. The possibilities here are immense as regards narcotic drugs.

Physicians write many prescriptions for preparations exempt under the provisions of the Harrison law, more especially for paregoric. Thousands of prescriptions for paregoric are written by Pennsylvania physicians for use by adults, despite the fact that the ordinary use for this preparation is in treating children. The Harrison law does not interdict its sale, and many druggists sell it freely. Most druggists realize that frequent purchase of paregoric in quantity means that the purchaser is an addict who wants both opium and alcohol. One druggist, with a store fronting the University of Pennsylvania, sold more than 2 gallons of it in the month of March. We ordered him to cease such sales, as they are against our regulations.

NARCOTIC DRUGS MOST FREQUENTLY PRESCRIBED

The federal-law-exempt National Formulary elixirs of terpin hydrate and codein, and terpin hydrate and heroin, as well as the host of similar proprietary preparations, are the "best sellers" in the narcotic field, so far as our records in Pennsylvania show, and this was especially the case during the influenza epidemic. Some people take to tippling with codein and heroin on their own account.

Codein is the narcotic appearing most frequently on the reports, morphin next, and then preparations of opium, followed by heroin and others. Cocain prescribing is becoming relatively infrequent. Codein, however, is rarely prescribed in excessive dosage, whereas heroin is very frequently so prescribed, especially in Philadelphia. There lies on my desk, just received, a report from a small drug store on South Eleventh Street, Philadelphia, noting fifty-six prescriptions for narcotics during the month of March. Fifty-one were for heroin, more than 1 ounce of heroin being incorporated in the aggregate number, or, to be exact, for these prescriptions were all written in the metric system, 35.351 gm. These prescriptions were all for addicts alleged to be under treatment for the cure of the addiction by reduction, so the *letter* of the law is obeyed. Of course, few drug stores handle so much heroin in a month. Naturally, we shall investigate every addict appearing on this report, which is difficult to do, for as soon as an addict begins to feel the reduction he usually goes to another physician and begins at the top again.

Proprietaries not federally exempt are largely prescribed by physicians, as our records show. Chief among them is glyco-heroin; papine is prescribed with relative infrequency. Although not under the narcotic laws, hydrated chloral is justly considered dangerous by the druggists, and many of them are reporting prescriptions for this agent, nearly all of those reported being for bromidia. I have personally examined nine addicts to the latter product. Addicts take paregoric and proprietary preparations containing narcotics in excessive amounts, 1 pint of paregoric at a dose being the extreme we have noted. The extreme dose of morphin, reported by a reliable druggist of Lebanon, was 6 drams at one dose, taken by a woman living in that city. She died some time later, and the details cannot be ascertained.

PRESCRIPTIONS

It is a relatively frequent occurrence for the reports we receive from druggists to carry prescriptions for as much as 1 ounce of morphin. There were three such prescriptions in the January, 1919, report from a drug store in a small town in Northumberland County, as well as five for 1 dram each. In many small towns, similar prescriptions are written, one from a small place in McKean County, carrying 1-dram prescriptions written by a single physician during the month of March in the aggregate of 14⅝ ounces of morphin sulphate. The last is our "prize" record, but we get numerous others which are not far behind it. One drug store in Dauphin County, during the month of February, filled three prescriptions, each for 1 ounce of morphin, and a few months ago filled one for a pound of gum opium. It is common to find a score of prescriptions calling for 1 dram of morphin listed from the stores of one town in a single month.

Records of the foregoing instances, and many more, are on file here, but are open to inspection only by officers of the law, federal or state. Any of the officers named are welcome to come and see, provided they will *do* something in the matter. So far as we can ascertain, the Harrison law has not deterred any of the prescribers noted.

We take up each prescription for an excessive amount of drug with the physician writing it. Of course, most of these are for addicts; but a surprisingly large proportion of them are for aged persons who are a burden to themselves and to every one else. What can the physician do with these people? Many of them have been addicts for forty years, and the physician inherits them from a predecessor who started them on the drug. But many are pure addicts, a few are even of the criminal class. Very many are prostitutes. The medical profession faces a problem—one which we are studying and trying to handle constructively.

Our follow-up on these heaviest prescriptions reveals the fact that some are written for people living at a distance in the country, to save them the inconvenience of a trip to town; it also reveals another fact, which is that there are often in the same family two or three addicts, only one of whom is known to the physician writing the prescription. Occasionally the addict divides with a friend who is a secret user. Occasionally a heavy prescription by a physician turns out to have been for animals on the farm.

We do not conceive it to be the function of the department of health to arrest physicians for technical violations. Our interest lies in the line of prevention and public health, with fair and humane treatment of addicts who are victims of circumstances. We carefully collect evidence, evaluating it judicially and from the clinical standpoint. We issue many warnings to physicians, but report to the authorities the derelict and incorrigible ones, as well as addict physicians and dentists who refuse treatment for their own cure.

Our experience is that the druggists realize the dangers of addiction better than do the physicians. Certainly it is the druggists, and not the physicians, who are the better cooperating with us. We are under many obligations to the pharmacists of the state, practically all of whom are registered with this bureau, while only about one half of the physicians have registered, despite the requirements of the law to this effect. Physicians voluntarily report addicts to us rarely, while the druggists do so very generally.

The heavy prescriber of narcotics always justifies himself in his own eyes, while the druggist compares one physician with another, to the discredit of the heavy prescriber and dispenser. Comparatively few dispensing physicians are heavy buyers of narcotics, but there are enough of them to cause much trouble. The heaviest narcotic purchaser of record with us was a physician, now dead, who bought 400,000 one-quarter-grain morphin pills in one year. He has left a fearful proposition to his successors. Purchases of from 5,000 to 10,000 morphin pills in one year are made by a considerable number of physicians, especially in the north-central district of the state. We fear that some of these physicians come to look on narcotic tablets as so much merchandise, little realizing the harm they are doing with them, for some become very indignant when we write to them about it, and explain, in some instances, that the internal revenue officials raise no issue with them as to their purchases. Of the truth of the latter allegation we have no proof, but as there are about 25,000 dealers, etc., to inspect in the state, and one inspector can adequately examine only six to eight of these in one day, a dozen inspectors, constantly working, are required to cover the state once a year. Naturally, then, a great deal "gets by" without issues being raised.

Hypodermic tablets of morphin figure very prominently in our records of purchases by physicians, and a great many prescriptions are written for them, ranging from twenty-five to 200 tablets each. Some physicians furnish addicts with hypodermic syringes, more especially when the addict's home is remote from the physician's office.

Despite the warnings in the journals and the action of the government, heroin seems to be almost universally used by physicians as a cough sedative. It is displacing codein, largely owing to the fact that, per dose, it costs less than codein. In our view, the manufacture of heroin should be absolutely suppressed.

CLASSIFICATION OF ADDICTS

For purposes of classification we list pure addiction, addiction with disease, addiction with incurable disease, addiction in the aged, and addiction of the criminal.

On the face of the reports, pure addiction is rare; for nearly all addicts claim to have some disease, and any of these persons can find some renegade physician to testify in writing that the individual has disease. Investigation shows the fallacy of most of these reports. We believe that pure addiction really constitutes the larger proportion of all addiction.

Addiction with disease is commonly the result of poor medical or surgical treatment, or of none at all except by medication, which is usually empiric. In relative frequency the diseases named in reports are: neuralgia, chronic diarrhea, asthma, cystitis, other genito-urinary diseases, chronic bronchitis, tertiary syphilis, tuberculosis, various surgical troubles, postoperative troubles, cardiac affections, diabetes and cancer.

Be it noted that conditions actually justifying the continued use of narcotics are relatively infrequent in the reports. The report is commonly "incurable," which means nothing to us here, for we find that while some of these persons have cancer, various other inoperable conditions, etc., most of these reports mean incurable addict; that is to say, the physician does not care to bother with the treatment of addiction, and roughly classes addicts as "incurable."

Except in obviously incurable conditions and addiction, physicians do not like to write "incurable" on a prescription or report, for the very valid reason that it discourages the patient and his friends, and often drives the patient to the quack or the cultist.

VIOLATORS OF THE LAWS

We believe that the greater proportion of the worst medical violators of the narcotic laws are men past 50 years of age. Before restrictive laws were enacted, narcotics could be freely bought and freely prescribed, and many of the elder physicians became accustomed to carrying addicts along, and want to do so now. Empiricism largely accounts for the aged addict and the aged medical offender against the narcotic laws. It is a real charity, in the larger sense, to give aged and diseased addicts adequate modern treatment, for many can be cured of both the disease and the addiction in the hands of capable physicians. To take a charitable view, misplaced sympathy accounts for some physicians catering to drug addicts.

Catering to addiction has become commercially profitable, and it is carried on by two classes, physicians and pedlers, the latter being a small factor as compared with the nefarious activities of a certain class of debased physicians who are commonly in league with equally debased pharmacists and with the underworld. The pedlers we have had arrested are a sordid lot, not half as shrewd as the newspapers credit them with being. We are accumulating evidence against the debased physicians, pedlers, underworld folk, and criminal addicts, and are beginning to employ the Pennsylvania state police in this work. They are one of the finest police organizations in the country, and we expect good results from their activities. They commonly "get" the man they are after.

A striking fact revealed by our records is that veterinarians are very small purchasers of narcotics, despite the fact that the doses they must use are relatively large. Horses and cattle never have drug habits, and they get the drug only when indicated. We wish the same could be said of human beings.

TREATMENT

Some day, we hope, the treatment of drug addiction will be placed on a rational basis. Thus far it has not been. True, there are some institutions and a few men having excellent results. The best results we have seen were in prisons, and for obvious reasons. Perhaps some of the prison methods might be modified and applied elsewhere.

The gradual reduction method, except in the case of addicts with disease, and of aged addicts, appears to us to be a failure. The matter is one, primarily, of detoxication, and vigorous methods are necessary in most cases. Unfortunately, the average physician is opposed to any method of treatment which entails suffering or discomfort on the part of the patient, and hence his treatment is a mere bluff. Yet he expects the patient with peritonitis, typhoid fever, or pneumonia to suffer discomfort during treatment. Until the profession at large changes its attitude toward the treatment of the drug addict, it will accomplish little of definite value. We need a scientific study of the problem in the general hospitals, and they are in better position to treat the addict successfully than are most of the advertised institutions which make a specialty of such cases. What is their duty in the premises? We do not feel like dictating in such a matter, for the principal function of the health officials is prevention, not treatment. We do not recommend any special form of treatment, but the state has provided for the erection of a special hospital for the treatment of alcohol and drug inebriates, which, when completed and in operation, we hope will develop worth-while methods.

Our Pennsylvania experiment has thus far justified itself, but we are not dealing in illusions. It is on a good legal basis, which we hope to strengthen, and we are fully impressed with the immensity of our task. We believe the department of health is in good position to conduct such work. As yet there is little of scientific value to guide us, and the medical profession is not awake to the perils to society and to public health of the various drug addictions, or to what they threaten to become after national prohibition is in force.

Statements regarding bad medical reports, as made in this article, are recorded with infinite regret. But we must face the issues as they actually are. We are going strictly by the law and the evidence, and have no preconceptions. On the other hand, there is ground for great medical encouragement, for fully three fourths of the records coming into this office are so good that they are merely checked off and filed. So, then, we conclude, justly we believe and hope, that ultimately the whole Pennsylvania profession will be found working side by side with us in this reform. We crave medical interest and noncommercial suggestion, and will welcome them.

RECOMMENDATIONS

One engaged in such work as we are undertaking here is apt to become radical. Be this as it may, kindly permit an expression of personal view, for what it may be worth.

After sufficient administrative machinery, both federal and state, is developed, I believe that the importation and sale of *all* habit-inducing drugs should be made a government monopoly; that it should be unlawful for any physician to prescribe or dispense any of these drugs in any but the accepted therapeutic dosage under any conditions, or to buy or possess them in quantity greater than the legitimate therapeutic needs of his own or institutional practice fully justifies; that pharmacists be prohibited from selling them in any quantity whatsoever, and be allowed to fill no prescription calling for more than the usual therapeutic dosage; and that no ready-made or proprietary product carrying any narcotic whatever be allowed to be sold.

I would have an official, not in medical, pharmaceutical or dental practice, in every district, to whom every particle of the government supply for the district should be sent. It would be his duty to estimate the legitimate needs of all professional people and to supply them so much and no more, except in time of public emergency or unusual circumstances. To him should be reported every addict in the district, even inoperable surgical cases, as well as all persons requiring, on the testimony of a physician, doses in excess of the usual; and this official would supply to these persons such amounts as would appear necessary, humanely caring for the addicts already made, but sternly refusing to supply new ones except those with disease which positively demand large doses.

This plan would yield definite results and would relieve the physician of an unwelcome class of work that, in the nature of the case, he cannot handle well. Perhaps there would be much medical objection at first; but I believe it would work so well that the profession at large would soon come to support it most enthusiastically. Certainly it would relieve the profession of a great amount of narcotic bookkeeping and reports, and I believe it would control the problem much better than does any existing plan.

PROTRUSION OF ARTIFICIAL PNEUMOTHORAX INTO THE OPPOSITE UNTREATED SIDE *

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The effect of unilateral increase in intrapleural tension, as seen in pleural effusion and spontaneous pneumothorax, on the position of the mediastinal organs, had been well known long before artificial pneumothorax was added to the armamentarium of phthisiotherapy. Indeed, one of the most important signs of pleural effusion and spontaneous pneumothorax is displacement of the heart toward the sound side. Grocco's triangle as a sign of pleural exudate is also supposed to depend on the shifting of the mediastinal contents toward the unaffected side.

Most of the information regarding the effect of increased intrapleural tension on the mediastinum gathered in previous years was, however, mainly the result of observations in cases of pleural effusion. Nitch,[1] in a rather instructive article based on experimental evidence, describes most lucidly the anatomy of the mediastinum, laying particular stress on those vulnerable points which are most likely to yield to increased intrapleural pressure. He, however, seems to put pneumothorax and pleural effusion in one and the same category. It must be pointed out that the hydrostatic pressure of pleural effusion and the pneumatic pressure of pneumothorax will not at all behave in the same manner, the essential difference being that fluid exerts its pressure on most dependent parts, while air exerts pressure equally in all directions. Hence, while fluid will cause displacement mostly of the heart and the lower mediastinal organs, air will produce displacement of these organs as well as distention of the pleural sac at the most vulnerable points, whether this vulnerable point be at the upper or the lower portion of the mediastinum.

It has already been pointed out by various observers that the displacement of the mediastinum during the course of artificial pneumothorax is a rather frequent occurrence. The degree of displacement will depend on the presence or absence of pleural and pleuropericardial adhesions, on the extent of the mobility of the mediastinum in the individual patient, and on the amount of pressure created.

Along with marked displacement of the mediastinum during the course of artificial pneumothorax, we have had occasion to observe another phenonenon, of which, so far as we could find, no mention has been made before. This phenomenon, though associated with displacement of the mediastinum, is dependent on an entirely different factor, and that is extreme distensibility of the pleura.

As has been proved by physical signs and confirmed by roentgenologic examination, the cases that came under our observation showed a pocket of pneumothorax extending into the untreated side to about 3 inches beyond the median line on a level with the first space to the third rib anteriorly. Considering that at this area the two pleural sacs meet at the median line; and furthermore, since, as pointed out by Nitch,[1] the mediastinal space at this area contains nothing but loose areolar tissue, it is surprising, indeed, that we do not observe the pneumothorax extending beyond the median line more often. It is possible, however, that many such cases passed unnoticed.

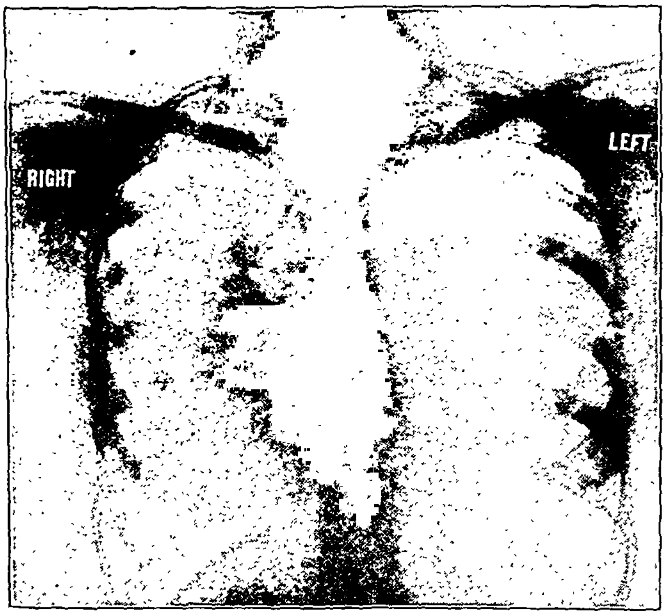

Fig. 1 (Case 1).—Left pneumothorax: mediastinum markedly displaced to right; semicircular area of pneumothorax to right of sternum.

REPORT OF CASES

Case 1.—*History*.—E. H., schoolgirl, aged 17, admitted to Bedford Sanatorium, June 18, 1918, with negative family history and previous personal history, though subject to occasional cough for an indefinite time, had not had symptoms in any way disturbing until about one and a half years before admission, when cough and expectoration greatly increased. At this time, she also experienced elevation of temperature in the late afternoon hours, the fever occasionally rising to 104 F. This condition continued for about three months. During that time she also suffered from frequent night sweats and considerable loss of weight and strength. Accordingly, the patient was admitted to an institution for the tuberculous in New York City, where a physical examination disclosed marked infiltration and cavity formation in the upper half of the left lung, infiltration at the right apex, displacement of the heart considerably to the left, and considerable retraction of the diaphragm on the left side. In view of these physical findings and the rapid progress of the disease, pneumothorax was induced on the left side, Oct. 16, 1917. Subsequent refills were given at regular intervals till March 11, 1918. At no time were there more than 600 c.c. of gas given. The final intrapleural pressure was usually about plus 2 to plus 3 cm. of water. Roentgenograms taken on various occasions disclosed progressive increase in the pneumothorax area and gradual displacement of the mediastinal organs to the right. The improvement in the patient's condition was remarkable. The fever abated, cough and expectoration diminished, and a considerable increase in weight was noted. The patient was transferred to the Bedford Sanatorium, June 18, 1918.

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* From the Montefiore Home Country Sanatorium.

[1] Nitch, A.: Beitr. z. Klin. d. Tuberc. 18: 1, 1911.

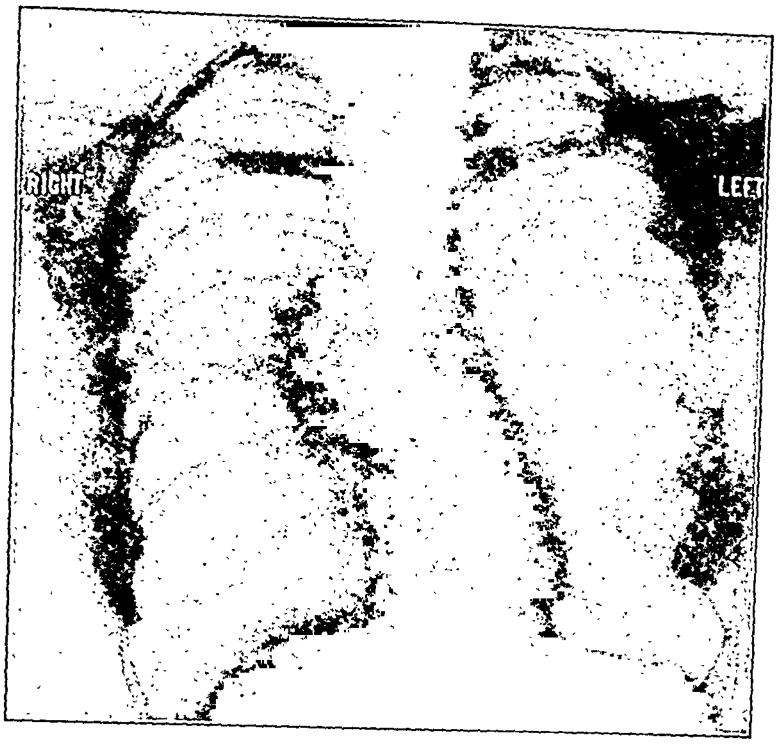

Fig. 2 (Case 1).—Condition five months later: absence of semicircular area of pneumothorax to right of sternum.

Physical Examination.—The left chest was hyperresonant throughout except at the extreme apex. The right chest showed impaired resonance from the apex to the second rib aneriorly. On auscultation, distant amphoric breathing and amphoric whisper were elicited all over the left chest. Breathing and whisper of the same character were heard also over the upper part of the sternum and in the first, second and third spaces to the midclavicular line on the right side. The coin sound during percussion over the left side posteriorly was heard all over the left side anteriorly, extending over the upper part of the sternum and to about the midclavicular line on the right side. There was an area of loud amphoric breathing and whispered pectoriloquy just above and outside of the right nipple.

Fluoroscopy and a roentgenogram (Fig. 1) taken June 10, 1918, disclosed pneumothorax occupying the entire left pleural cavity with the exception of the apex, marked displacement of the mediastinal organs to the right, and a definite semicircular air-containing area extending to about 2 inches to the right of the sternum on a level with the first to the third rib.

Treatment and Course.—Refills were continued at intervals of from three to four weeks, the final pressure at most refills not being more than plus 1 cm. of water. The degree of mediastinal displacement was gradually lessened, and the air-containing semicircular area to the right of the sternum gradually disappeared, as shown in Figure 2.

Case 2.—*History.*—C. P., schoolgirl, aged 16, admitted to Bedford Sanatorium, July 18, 1918, with unimportant family and previous personal history, reported that one and a half years before admission she had caught cold, and had begun to cough and have pain in the chest on breathing. Afternoon rise of temperature and night sweats soon made their appearance, with the inevitable loss of weight and strength. She was confined to her bed for about three months, when she finally gained admission to the Mount Sinai Hospital, New York, where, on account of continued symptoms, marked involvement of the left upper lobe, and a relatively clear right lung, a left pneumothorax was induced, Feb. 1, 1918. Subsequent refills were given at the usual intervals until June 11, and although at no time were there more than 700 c.c. of gas introduced, the final intrapleural pressure was permitted to rise to plus 3 and even to plus 5 on several occasions. The patient improved markedly, most of the symptoms disappearing, and was transferred to Bedford Sanatorium, July 18, for further treatment.

Physical Examination.—On the day after admission there was hyperresonance throughout the left chest and the inner part of the right infraclavicular region. Distant amphoric breathing and amphoric whisper were elicited all over the left chest anteriorly and posteriorly. Breathing and whisper of the same character, pitch and intensity as over the left side were also heard over the upper part of the sternum and to about the midclavicular line in the first, second and third spaces on the right side. During percussion with a coin over the left side posteriorly, a metallic sound could be heard over the upper part of the sternum and over the same area on the right side above described, as well as all over the left side anteriorly. No coin sound could be elicited on percussing the right side posteriorly. The heart was markedly displaced to the right. There was evidence of a small amount of fluid at the left base.

Fluoroscopy and a roentgenogram (Fig. 3) revealed pneumothorax occupying the entire left pleural cavity. An irregular air-containing area, extending to about 2 inches to the right of the right sternal margin encroaching on the right lung and partially collapsing it, was definitely seen.

Treatment and Course.—While the patient remained at the sanatorium, refilling was done at intervals of about three weeks. The amount of air introduced was usually about 400 c.c. and the final intrapleural pressure was never above plus 2 cm. of water.

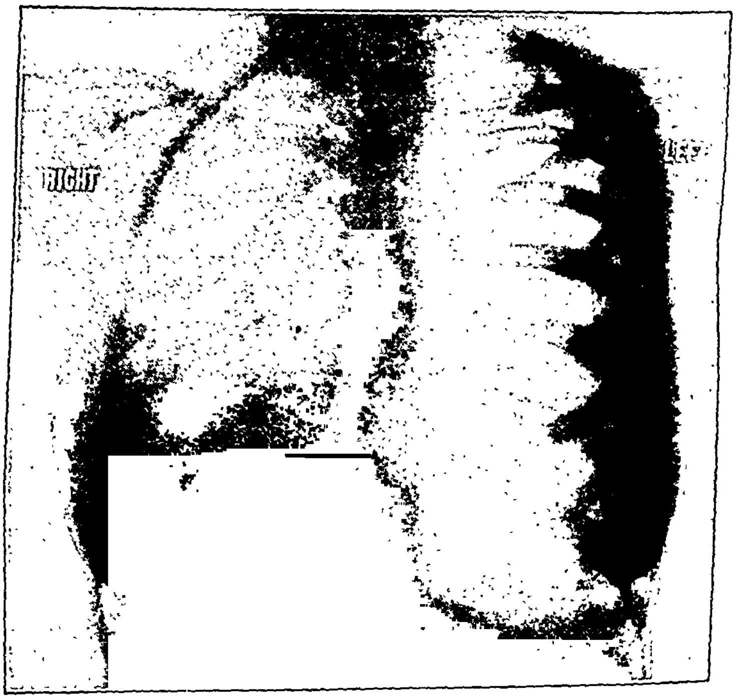

Fig. 3 (Case 2).—Left pneumothorax: mediastinum markedly displaced to right; air-containing space to right of sternum.

During the course of treatment a moderate amount of fluid formed at the left base. The fluid was promptly absorbed, leaving behind rather extensive adhesions at the left base, and as a result of these adhesions the mediastinum was drawn considerably to the left.

Frequent fluoroscopy and roentgenographic examinations showed that the degree of displacement of the mediastinum gradually diminished, the air-containing area that extended to the right of the sternum gradually disappeared, and finally the mediastinum was drawn markedly to the left, as seen in Figures 4 and 5.

COMMENT

These cases deserve scrutiny, since both of them show a characteristic protrusion of the distended pleural sac, encroaching on the untreated side, in addition to marked displacement of the mediastinal organs.

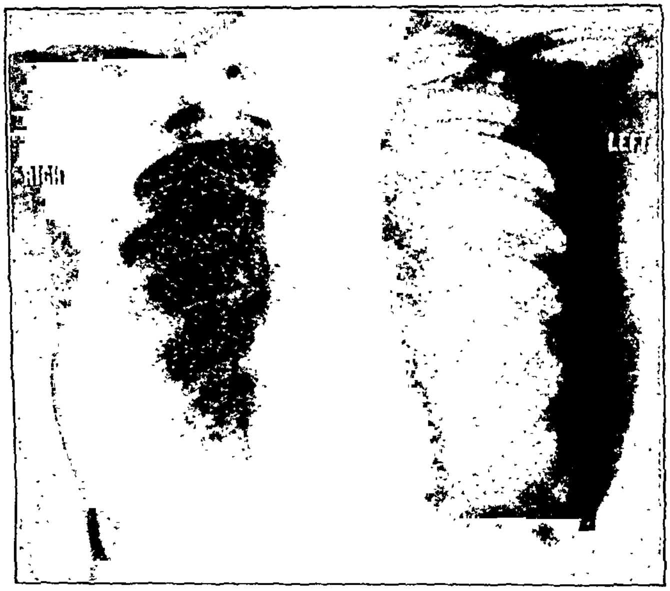

Fig. 4 (Case 2).—Condition six weeks later: air-containing area to right of sternum considerably smaller.

On superficial examination, the amphoric breathing and amphoric whisper that were elicited on the right (untreated) side could be considered as evidence of cavitation on that side. But, as stated above, the amphoric breathing and amphoric whisper that were heard over the upper part of the sternum and over the first, second and third spaces on the right side were exactly of the same quality, pitch and duration as those heard over the left (pneumothorax) side. The same was also true of the coin sound. On percussion over the left side posteriorly, a definite metallic sound was elicited over the above described area on the right side as well as all over the left side anteriorly. These physical signs leave hardly any doubt that the signs on the right (untreated) side were due to the pneumothorax on the left side.

But whether these signs were due to a pocket of pneumothorax actually protruding into the right side, or the pneumothorax signs were merely transmitted from the left to the right side, had as yet to be determined. But this was definitely decided by fluoroscopy and roentgenographic examination.

Figure 1 (Case 1) shows a definite semicircular, air-containing area to the right of the sternum which can hardly be considered as anything else but a protrusion of a left pneumothorax into the right side. Furthermore, Figure 2 of the same patient, taken a few months later, when the intrapleural pressure was reduced, shows that this area has absolutely disappeared, at the same time that the mediastinal organs have returned nearer to their normal position.

Figure 3. Case 2, is perhaps less typical of a protruding pleural sac, as most probably the air-containing area merges into the light area produced by the displaced trachea; but, correlating the physical signs and the roentgenographic findings in both these cases, it could hardly be doubted that in both of them we are dealing with a gas-containing pleural sac protruding from the left to the right side.

The causation of such protrusion can easily be explained, when we remember that opposite the second and third ribs anteriorly the two pleurae meet at the median line. Furthermore, as mentioned above, Nitch has found that at this area the mediastinum contains nothing but loose areolar tissue, owing to the fact that the thymus gland is atrophied in the adult. It is clearly seen that when the pleura is distensible and a certain amount of pressure is introduced, the pleura will easily protrude in this area, which is undeniably its most vulnerable point.

Displacement of the mediastinum was rather marked in both cases. Case 2 shows, in addition, extreme mobility of the mediastinum, since at first a marked displacement to the right is noted, as shown in Figure 3. Figure 4 shows the mediastinum almost in its normal position, and finally marked displacement to the left is to be seen, as an examination of Figure 5 will show.

The degree of mediastinal displacement is dependent on a variety of factors. While a considerable amount of pressure is necessary to produce marked displacement, there are various modifying influences which will either prevent or facilitate displacement of the mediastinal organs. The most important factors that will facilitate mediastinal displacement are absence of pleural and pleuropericardial adhesions, and elasticity and distensibility of the ligaments that hold the mediastinum in place.

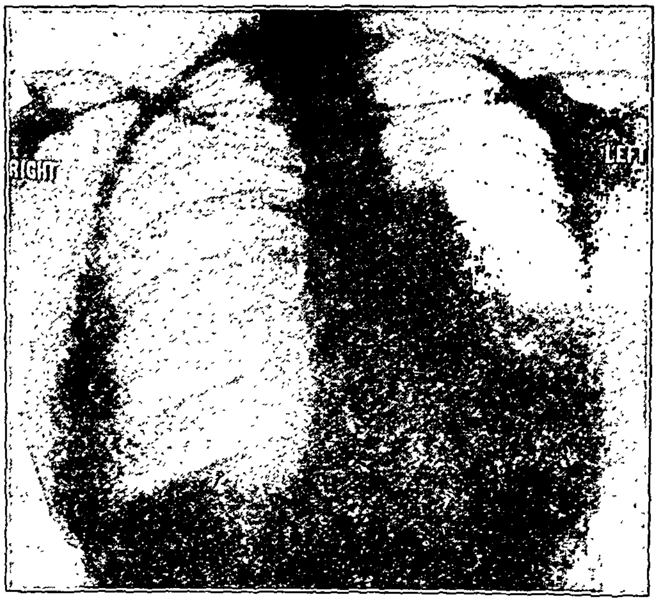

Fig. 5 (Case 2).—Two and a half months after Figure 4: marked displacement of mediastinum to left, and absence of pneumothorax area to right of sternum.

It is to be noted that both our patients are young adults (16 and 17 years of age), and undoubtedly their youth had something to do with the ease with which their mediastinal organs were displaced and their pleurae distended. It is reasonable to suppose that in the young the ligaments are more elastic and the pleura more distensible than in older persons.

EPIDEMIC ENCEPHALITIS LETHARGICA

OR EPIDEMIC SOMNOLENCE, OR EPIDEMIC CEREBRITIS, WITH REPORT OF CASES AND TWO NECROPSIES

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In taking up the subject of epidemic encephalitis lethargica I have not gone into the history of the condition because in doing so I would be repeating matter which has already appeared in The Journal.[1] These articles, however, do not refer to certain previous publications on the subject. Dr. I. P. Battle of Rocky Mount, N. C., has kindly furnished me with reference to an article published by Landon Carter Gray, W. B. Pritchard and R. C. Shulz.[2] In this article is described a condition known as "nona" which seems to closely resemble the present epidemic. There also appeared an article by Trautjen[3] in 1890 in which he attributed the condition to the influence of the recent epidemic of influenza. Another article on the condition appeared in 1890 by Hammerslough,[4] and another the same year by Mauthner.[5] This article attributed the pathologic lesions to polioencephalitis superior.

REPORT OF CASES

Case 1.—L., a colored man, aged 21, had no history of influenza or other infectious disease except a probable chancre one year before. There was no history of secondary syphilis, no glandular enlargement, nor apparent signs of syphilis. Somnolence appeared in the latter part of December, 1918, and followed a pain in the chest, a sense of sudden hunger, and great muscular weakness, especially of the legs. He also had headache, vertigo and tinnitus. There was slight elevation of temperature at times. The respiration and pulse were normal. The deep reflexes were exaggerated, there was double ankle clonus, no Kernig's sign and no Babinski reflex. General spasticity was present to a moderate degree. Examination of the eyes revealed photophobia, nystagmus, diplopia, and limitation of lateral excursions. Mentally, the patient was normal when aroused. The cerebrospinal fluid was under greatly increased pressure, globulin test negative, Wassermann test negative. Examination of the blood gave a leukocyte count of 8,200. A Wassermann test on the blood was negative. Examination of the urine was negative. The patient lay in one position unless aroused, but when aroused talked rationally and took medicine and food. There was no incontinence. He was somnolent about a week, and died shortly afterward. Necropsy revealed very severe congestion of the superior longitudinal sinus; cobweb adhesions over the base of the brain involving the cranial nerves and extending down into the cord; marked congestion of the entire cortex; tremendous distension of the third, fourth and lateral ventricles, and swelling and congestion of the pituitary.

Case 2.—P., a white man, aged 30, with no history of influenza, began to be somnolent about one week before coming to the sanatorium. He had a slight elevation of temperature, headache, nausea and vertigo. Preceding the onset he had several days of restlessness and excitement. There was no respiratory involvement. The right knee jerk was absent and the left diminished. There was no Babinski reflex, no clonus and no Kernig's sign. There was no muscular rigidity. He had double ptosis, conjunctivitis and diplopia and the pupils were sluggish to light. The patient had slight exophthalmos, choked disk on the right, and slight blurring of the left eye ground. The blood pressure was normal. A lumbar puncture revealed the fluid under increased pressure; the cell count was 35, and the globulin slightly increased. Wassermann tests on both the cerebrospinal fluid and the blood were negative. There was a leukocytosis of 17,600. The urea content of the blood was increased. The urine showed a specific gravity of 1.014, some hyaline and granular casts, and no albumin, but there were no clinical signs of a uremic condition. The patient slept most of the time and lay in one position, speaking only when spoken to, and then only in monosyllables. He could be aroused for food and medicine and urination and defecation, but immediately became somnolent again. He died after sixteen days of somnolence. His respiration kept up ten minutes after his heart stopped. Necropsy was refused.

Case 3.—C., a white boy, aged 7 years, had influenza in October, 1918, recovered, and remained well until Feb. 22, 1919, when he began to be somnolent, and had a temperature between 100 and 102 F. for four or five days. Since then his pulse and respiration have been normal and there has been no respiratory involvement. He has had no nausea or headache but occasional vomiting. The patient had no clonus, no Kernig's sign and no Babinski reflex. His knee jerks were normal. There was no cranial nerve involvement. The muscular tone was catatonic, and "lead pipe" rigidity was present. The pupils were slightly dilated and sluggish to light, but the fundi were negative. When aroused he would look at one, but he spoke only a few words the four weeks he was somnolent. The cerebrospinal fluid showed moderately increased fluid pressure; cell count, globulin and the Wassermann test were negative. There was a leukocytosis of 12,400; polymorphonuclears, 43 per cent.; small lymphocytes, 50 per cent.; large lymphocytes, 6 per cent.; eosinophils, 1 per cent.; malaria, negative. The blood urea was increased. The urine was negative. The child did not change his position in bed; he could be aroused for food and medicine, but refused to talk. He had incontinence of urine and feces unless aroused. He recovered after four weeks of somnolence.

Case 4.—T., a white man, aged 41, had influenza in November, 1918, and was sick ten days with fever, cough, headache and delirium. This was followed in a few days by a right hemiplegia with aphasia, thought to be due to a cerebral thrombus. The somnolence began about two weeks after the influenza, and has kept up ever since. The patients temperature was between 100 and 102 F. for two months, but it has since been normal. His respiration has been normal and his pulse has ranged between 66 and 90. He has had no respiratory involvement since influenza in November. He has had occasional headache and vomiting, but no vertigo. At first he had a slight Kernig's sign, Babinski reflex on the right, right hemiplegia, left facial palsy, slight clonus on the right, and general spasticity. The Babinski reflex and clonus have disappeared, and the spasticity has improved. The pupils were sluggish, and at first there was moderate choking of both disks. The patient rarely speaks or attempts to speak, and is very lethargic. The cerebrospinal fluid was under pressure, the cells and globulin were increased, the Wassermann test and culture on the fluid were negative. The leukocyte count was 10,000 and the blood Wassermann test negative. A blood culture disclosed the presence of *Bacillus pyocyaneus*, but this disappeared under autogenous vaccine. The urine has been negative throughout. The blood pressure has ranged around 130 systolic and 90 diastolic. The patient can be aroused for food and medicine and looks around, but otherwise has been profoundly somnolent for over three months, and has incontinence of urine and feces.

Case 5.—S., a white man, aged 28, with no history of influenza, began to be somnolent, Feb. 25, 1919, and developed a rise of temperature ranging from 99 to 100 F. The pulse and respiration were normal and he had no symptoms of respiratory tract involvement. At first he had headache, but no vomiting nor vertigo. He had no Babinski reflex, no Kernig's sign, no clonus and no rigidity. The knee jerks were absent. When aroused, he complained of diplopia; the pupils were dilated and did not react to light. He had bilateral choked disk and bilateral ptosis. The conjunctivae were somewhat injected. The spinal fluid was under greatly increased pressure, the color clear, and the cell and globulin content increased. The Wassermann test was negative. There was a leukocytosis of 14,000. The blood showed a moderate increase in the urea content. The urine was negative and the blood pressure normal. The patient was profoundly somnolent but could be aroused for food and medicine. When aroused, he would answer questions only in monosyllables and would not speak voluntarily. He lay in one position unless moved, and had incontinence of urine and feces. He died after twenty days of somnolence. A necropsy of the brain was performed by Dr. S. W. Budd of Richmond.

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[1] Pothier, O. L.: Lethargic Encephalitis, J. A. M. A. **72**: 715 (March 8) 1919. Epidemic or Lethargic Encephalitis (Nona), special article, ibid. **72**: 794 (March 15) 1919. Epidemic or Lethargic Encephalitis, editorial, ibid. **72**: 796 (March 15) 1919. Bassoe, Peter: Epidemic Encephalitis (Nona), ibid. **72**: 971 (April 5) 1919.

[2] Gray, L. C.; Pritchard, W. B., and Shulz, R. C.: Annual of Universal Medical Sciences, Sajous **2**: A-39, 1891.

[3] Trautjen: Berl. klin. Wchnschr., June 2, 1890.

[4] Hammerslough: Wien. med. Presse, May 11, 1890.

[5] Mauthner, Ludwig: Wien. med. Wchnschr., July, 1890.

The skull was opened in the usual manner. After removal of the skull-cap it was noticed that there was considerable congestion of the dura and underlying tissues, and that along the longitudinal sinus there were many varicosities on each side in the region of the fissure of Rolando. On removal of the dura it was noted that all of the membranes were attached to the cortex for 1½ or 2 inches on each side of the longitudinal sinus. Elsewhere the brain was in no way adherent to the membranes. On removal of the brain there was noticed a thin, delicate, inflammatory membrane over the base and extending well up over the temporal lobes of the brain. This membrane was prominent around the cranial nerves, the pons and the medulla, and there were a number of cobweb adhesions between the cranial nerves and the brain. On section of the cortex of the brain the capillaries were distended, but there was no evidence of macroscopic hemorrhage. The lateral and third ventricles were not dilated. There was no evidence of congestion or hemorrhage in the region of the fourth ventricle. On section through the cerebellum the tissues looked normal. Microscopic examination of the cortex of the temporal lobes showed a slight enlargement of the capillaries, with occasional polymorphonuclear leukocytes around the capillaries, and the individual nerve cells seemed a little larger than normal. The pia mater and the arachnoid were infiltrated with a moderate amount of fibrin and polymorphonuclear leukocytes, and the capillaries were much distended. The medulla, pons and cerebellum showed the same histologic changes as the cortex. Cultures from the base of the brain and the meninges were negative for pathogenic organisms. The pituitary body was much congested and infiltrated with blood cells into the tissues. There was also some cloudy swelling of the cells of the pituitary body. This congestion was in both the anterior and the posterior lobes of the gland. The pituitary body was also enlarged in size.

CASE 6.—B., a white man, aged 51, was thought to have influenza in August, 1918. He had taken sick, March 1, 1919, with a temperature ranging from 100 to 101 F. for a week, but with no cough or respiratory symptoms. March 14, the patient became somnolent and slept most of the time for a week. Pulse and respiration were normal. There was no respiratory tract involvement, vomiting nor headache, but there was some vertigo. There was a bilateral Babinski reflex, but no clonus. The knee jerks were negative, and the speech was a little thick. The conjunctivae were injected. The patient complained of diplopia, and the pupils were somewhat contracted. The blood pressure was normal. The spinal fluid was under increased pressure, the cell count 25, globulin increased, Wassermann test negative. The leukocyte count was not made. The urine was negative. The patient was very somnolent, did not change his expression or his position in bed, and rarely spoke, but would eat, urinate and defecate when aroused. He remained somnolent for a week.

The symptoms in the remaining five cases practically corresponded to those in the cases more fully reported. Only the striking points of these five are mentioned:

CASE 7.—F., a child, was somnolent for three days, and for several days afterward showed marked difficulty in gait with practically no changes in the deep reflexes. He made an uneventful recovery in a week.

CASE 8.—B. showed the usual symptoms, and was the only patient that showed difficulty in hearing. He had considerable nerve deafness on the right. There was also paresis of both oculomotor, right facial and the right hypoglossal. Somnolence lasted a week, and he made an uneventful recovery.

CASE 9.—M. did not give a history of influenza but had considerable rigidity, and the case somewhat resembled meningitis. The spinal fluid, however, was negative and the somnolence lasted only four days. The patient made an uneventful recovery.

CASE 10.—C. presented a typical case in which somnolence lasted about twelve days. This was the only case in which a roentgenogram of the skull was made. The roentgenographic findings were entirely negative.

CASE 11.—T. resembled the others except that he had very low blood pressure, it being 76 systolic and 58 diastolic on admission. This gradually became normal within three weeks. His somnolence lasted five days, and he made an uneventful recovery.

DEDUCTIONS

The incidence of influenza in these cases, and in others I have seen, is so striking that I believe epidemic encephalitis lethargica is either a manifestation of a recrudescence or recurrence of influenza, or in certain cases the expression of influenza per se. This is not absolutely proved, but is the most probable conjecture.

Since the height of the influenza epidemic there have been observed, all over the country, numerous cases of influenza which had, as sequelae, vertigo, depression of spirits or mania, and one or more cranial nerve affections. These cases are probably cases of encephalitis of more or less severity sine lethargica.

I cannot see any relation between epidemic encephalitis lethargica and infantile paralysis, either clinically or pathologically, nor do I think these cases should be termed meningitis, because the usual organisms of meningitis cannot be found in the cerebrospinal fluid, and pus is not found in the meninges at necropsy. Again, the clinical symptoms are not typically those of meningitis, even in the cases presenting spinal rigidity.

Epidemic encephalitis lethargica appears to resemble brain abscess more than any other condition. In fact, I have had three cases sent to me with the diagnosis of brain abscess. The history of rise of temperature, vomiting, vertigo and headache, and the finding of choked disks, cranial nerve palsies, drowsiness, leukocytosis and increased cerebrospinal fluid pressure in both conditions make a careful differential diagnosis necessary.

Epidemic encephalitis lethargica seems to be due to congestion of the pia and the encephalon, chiefly at the base of the brain, and to be accompanied by a slight inflammatory exudate affecting various cranial nerve roots and causing, as a rule, increased intracranial pressure with increased globulin content and increased cell count in the fluid.

Examination of the urine reveals nothing of special interest, but examination of the blood presents an almost constant moderate leukocytosis, and commonly an increase in the urea content.

We seem to be dealing more with a syndrome than with a new disease, and this syndrome is chiefly manifested by moderate transient elevation of temperature and frequently by headache, vertigo, vomiting, conjunctivitis, diplopia, choked disk, various cranial nerve palsies, muscular rigidities, changes in reflexes, increased cerebrospinal pressure with increased cell count and globulin content, increased blood urea, and last, but not least, somnolence, from which the patients may be aroused for food and medicine, but in which they usually lie without change of position or expression, and have incontinence of urine and feces.

I believe that the somnolence is chiefly due to pressure and inflammation of the pituitary gland.

ANTERIOR DISLOCATION OF THE ATLAS WITH A BREAK IN THE CONTINUITY OF THE ANTERIOR ARCH *

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In view of the fact that the combination of a break in continuity and dislocation of the atlas is rather unusual and that the patient gave a history of symptoms from the date of injury which might be attributed to this condition, this case seems of interest to report.

REPORT OF CASE

A private, aged 24, a ground man in an aero squad, a college student before entering the army, with a negative history, was injured by making his escape from a German air raid on the aerodrome to which he was attached, Aug. 17, 1918. He was found in an unconscious state along the roadside, and was taken to a dressing station, where a few hours later he regained consciousness. The patient remained here for ten days, during which time he suffered from intense headache and pain in the neck. Morphin was administered and also acetylsalicylic acid, but a diagnosis was not made.

He was transferred from this station to Hospital No. 13, at Boulogne. Here a roentgen examination was made and a diagnosis of skull fracture was reported. The symptoms increased in intensity, and the treatment was continued. After several days he was removed to Base Hospital No. 37, Dartford, England. The roentgen examination at this hospital was said to be negative. A diagnosis of eyestrain was made and the patient was fitted with glasses. The severe headache and the pain in the neck continued, in conjunction with which the patient said that his mind would become a blank at times. He lost weight and suffered from insomnia. Morphin and acetylsalicylic acid were administered for pain.

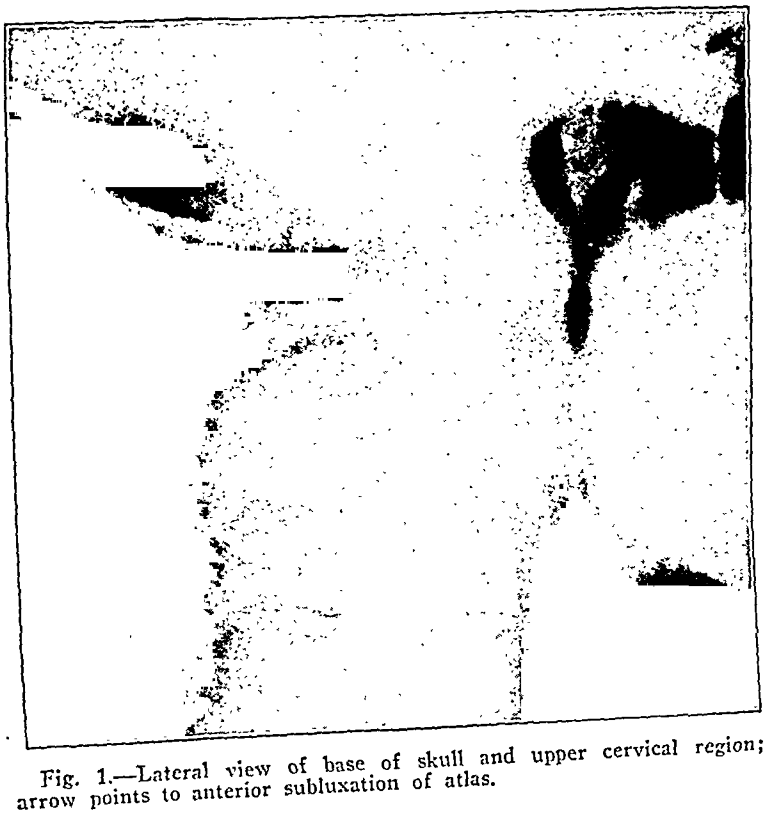

Fig. 1.—Lateral view of base of skull and upper cervical region; arrow points to anterior subluxation of atlas.

After two months he returned to this country, arriving at Staten Island, December 16. One month later he was transferred to U. S. Army General Hospital No. 3, at Colonia, N. J.

On admission the condition of the patient was good, but he complained of severe pain in the head and the neck which was more marked on the right side. The neck was stiff, rotation was limited, and the patient maintained a characteristic position of the head.

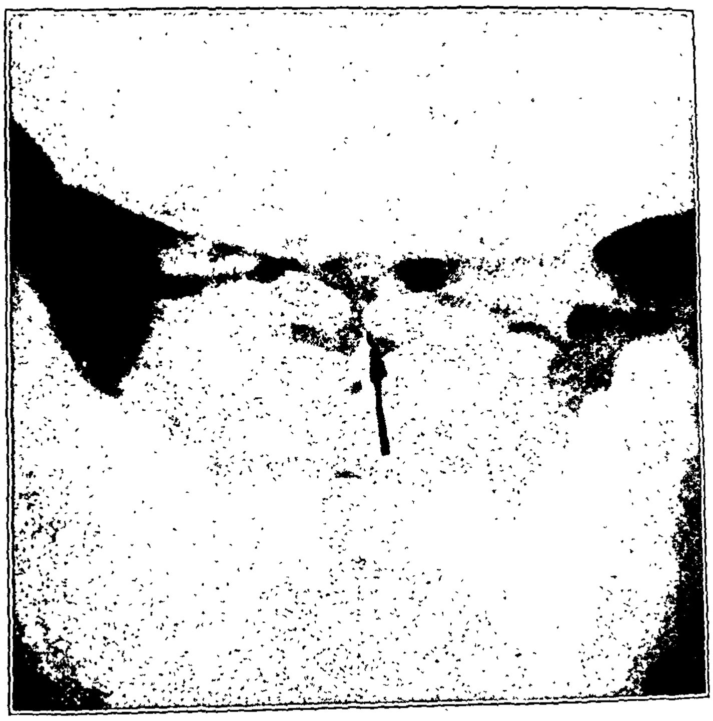

Fig. 2.—Anteroposterior view of atlas and axis through open mouth; arrow indicates break in continuity of anterior arch of atlas.

The department of neurology reported: cranial nerves negative; no palsies nor ataxias; superficial reflex active and equal; deep reflex exaggerated; right knee jerk definitely more active than left. The musculature of the limbs of the right side suggested more tone, and there appeared also to be somewhat stronger power in the left limbs (which, however, might be more apparent than real). There were no sensory changes, but some tenderness was found on percussion just below the inion. Another important and interesting symptom which developed just recently is that while the patient was on his way home on furlough, he temporarily had to abandon his trip and was taken to a hospital because of the severe pain which he developed in the head and the neck as a result of the jolting of the train.

The patient was referred to the department of roentgenology, Jan. 20, 1919, for the purpose of determining a possible skull fracture.

A stereoscopic examination was made of the skull and the upper cervical region. It was found that the skull was free from fracture, but that there was an anterior displacement of the atlas, as shown in Figure 1. An anteroposterior exposure was then made through the open mouth. This examination shows a break in the continuity of the anterior arch of the atlas, as shown in Figure 2.

Although several other plates were made to determine a possible error, each following examination showed an absence of skull fracture, but with these findings always present, namely: There was an anterior displacement of the atlas with a break in continuity of the anterior arch; the odontoid process was intact and free from bony articulation, and the anterior surface of anterior tubercle of the atlas was on a plane anterior to that of the anterior margin of the body of the axis.

The nasopharynx was examined, and a definite bulging mass, which was thought to be the anterior arch of the atlas, was found to occupy part of the cavity.

In view of the fact that the anterior arch sometimes develops from two centers instead of one, we have

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* From U. S. Army General Hospital No. 3.

thought about the possibility of the break in continuity as being a lack of fusion of the centers, rather than the result of a fracture due to the injury. There is, however, no question in regard to the anterior subluxation of the atlas, both from the roentgen findings and also clinically.

SPONTANEOUS PERIRENAL HEMORRHAGE (HEMATOMA)

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CHICAGO

The infrequency of spontaneous rupture of the kidney, only about thirty cases being recorded, and its seriousness without early surgical intervention, lead me to make this report of two cases. The fact that the patients were admitted to medical services and were kept under observation for some time before being transferred for surgical treatment is evidence that the condition is also of importance to internists.

REPORT OF CASES

Case 1.—*History.*—J. S., man, aged 27, admitted, Dec. 26, 1916, to the service of Dr. Roger T. Vaughan, with a diagnosis of lumbago, gave a history of pain over both kidneys for three weeks, increasing each day, and with exacerbations every ten to twenty minutes, so acute as to cause writhing and groaning. There was no vomiting nor nausea, and the pain did not radiate.

For five months, and ending four months previous to admittance, he had been employed in a place where anilin dyes were made. He left this occupation perfectly well, but urination for some time had occurred three or four times each night, and from four to six times daily. The family history was negative. The only prior illness, about four years previously, was diagnosed as a severe stomach trouble and was accompanied by vomiting and pain in the epigastrium and at a corresponding level in the back. This illness lasted three months. Syphilis and gonorrhea were emphatically denied. The patient was accustomed to drink about one-half pint of whisky every day. With the present illness there was no nausea nor vomiting.

Examination.—On admission the patient was very ill; the face was drawn; the eyes were sunken, and he was groaning most of the time and rolling about at times on his hands and knees and again lying flat on the abdomen. The temperature was 100 F.; pulse, 76; respirations, 20. Physical examination of the head, neck and chest was negative. The abdomen was flat, soft and without rigidity. There was tenderness on the left side in the region of the descending colon. There was no palpable mass in the abdomen. The Wassermann test was negative, culture mediums inoculated with the blood remained normal. Blood count revealed: leukocytes, 24,000; polymorphonuclears, 67 per cent.; small mononuclears, 16 per cent.; large mononuclears, 7 per cent. There were many pus cells and a few hyaline casts in the urine. The specific gravity was 1.020. There was no sugar. The roentgenographic examination for renal and bladder calculi was negative.

Jan. 7, 1917, there was pain in the shoulders and arms and lumbar region. There was increase of pain with movement. Blood count disclosed: leukocytes, 30,000. There were pus cells in the urine.

January 20, there was sharp, severe and continuous abdominal pain in the right iliac region and tenderness over McBurney's point. There was rigidity of the right rectus abdominal muscle. Constipation had been in evidence for two days, and was relieved by colonic flushing, but this failed to relieve the pain. There were 78,000 leukocytes. A diagnosis of appendicitis was reached, and the patient was transferred to the surgical service.

Operation.—When the abdomen was opened through a right rectus incision, the only lesion found was a large, dark, retroperitoneal mass which was opened external to the cecum and emptied of about 30 ounces of clotted blood. The clots were laminated and obviously the result of repeated hemorrhages. Exploration of the cavity revealed a perforation of the kidney. The abdominal wound was closed and the kidney was removed by the usual lumbar incision. The clamps left on the kidney pedicle were loosened after three days and were removed on the fourth. Recovery followed without noteworthy developments, and the patient was discharged, March 7, 1917.

Examination of the Kidney.—Gross and microscopic examination of the kidney demonstrated an ascending infection with multiple abscesses, with erosion (necrosis) of an arcuate artery and the formation of a small crater-like tear in the lower pole, 2 cm. deep in the cortex with extension of the hemorrhage from here into the perirenal fat, where there was still considerable blood.

Case 2.—*History.*—M. S., man, negro, aged 42, admitted to the medical service of Dr. Milton Portis, Aug. 8, 1918, complained of pain in the abdomen and back, vomiting and retention of urine. The illness had begun two months previously and one month after pneumonia, with the pain as stated in the back and abdomen, and with sharp attacks when the pain radiated to the genitals, the left thigh and occasionally to the left knee. Tenderness all over the left side was constant. There was a history of polyuria and of two urinations, as a rule, each night. About three weeks before admission the urine was red with blood and contained small clots on two occasions.

Examination.—On entrance a systolic murmur was heard at the apex, and the heart was apparently pushed upward a little. Expansion of the left side of the chest was somewhat limited. Systolic blood pressure was 120 mm.; diastolic, 60 mm. Pulse, respirations and temperature were normal. There was tenderness over the whole left side of the back up to the eighth rib and to the midline behind. The abdomen bulged somewhat on the left side, where a mass was felt extending up to the fourth rib and down to the iliac crest—a firm mass without notches, unmoved by breathing. Tenderness was present on the left side, as was found by rectal examination.

Cystoscopic examination by Dr. Harry Culver revealed the fact that a 24 French urethral sound passed without difficulty. The bladder was tolerant to fluid and to instruments. There was no blood in the urine, but a large, partly organized clot was found on the lining of the base of the bladder. The mucosa of the bladder was otherwise normal. Both ureters were catheterized without difficulty. The urine became clear after irrigation with sterile water. Of the left renal pelvis, the capacity of which was 18 c.c., a pyelogram was made.

Blood test revealed: hemoglobin, 75 per cent.; leukocytes, 25,500; polymorphonuclears, 94 per cent.

The clinical diagnosis was hypernephroma of the left kidney.

Operation.—Following transference to the surgical service, the abdomen was opened, August 15, through a long vertical incision in the left rectus abdominis region. Conditions in the abdomen were found normal, except for an enormous, dark purple mass located retroperitoneally on the left side. An opening was made through the mesocolon and about 3 liters of blood, most of which had been clotted for some time, were removed. The clots in this case were also somewhat laminated. The kidney appeared to be softer than normal, but was normal in size and no tumor was found. On account of the serious condition of the patient, the cavity was packed with gauze and the abdomen closed. Death occurred the next day. It was impossible to obtain a postmortem examination.

COMMENT

In view of the history of pneumonia and a heart murmur, it may well be thought, in this second instance, that the lesion of the kidney was originally a hemorrhagic infarct. According to Lippens,[1] with these spontaneous hemorrhages, dissection of the capsule from the kidney may be either localized or general. An extracapsular hemorrhage may become circumscribed or encysted.

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[1] Lippens, A.: L'hématome périrénal spontané, J. de chir. **11:** 1, 1913.

Severe pain in the kidney region, the presence of a tumor-like mass of variable dimensions, and evidence of internal bleeding are important symptoms. The pain is quite variable in character, radiating usually downward, but sometimes toward the shoulder. It may simulate closely the pain of renal colic. At times it is acute. Of great importance is the presence of blood in the urine. In some cases, jaundice, but not marked, has been noted. In only one case[2] has the diagnosis been made before operation.

Perirenal hemorrhages, such as these, need prompt operation and the amount of hemorrhage may make the prognosis grave. Whether nephrectomy should be done or not must depend on the conditions.

POSTINFLUENZAL ALOPECIA

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Alopecia following any severe febrile affection is a common occurrence. Morrisey[1] states that the older literature gives no references to a postinfluenzal alopecia, but Jackson and McMurtry[2] note that, of ninety-seven private patients suffering from a febrile alopecia, influenza was responsible for nine.

There is still some question as to whether the loss of hair after fevers is due to interference with the nutrition or to a toxin acting directly on the hair papillae, although the former view is more generally held. Most of the writers agree that a preexisting seborrhea makes the loss of hair more certain.

To date I have seen fifty patients suffering from alopecia following influenza. Of these, three were men and forty-seven were women. It is highly probable that women are much more apt to consult a physician, men feeling that the affection is trivial and hardly worth troubling about. Several of the more intelligent barbers have told me that practically all of their customers who had had influenza lost much of their hair. As the epidemic was more severe among the young it is only natural that the alopecia patients were all young. Unquestionably the severity of the disease has much to do with the subsequent loss of hair. One third of my patients had had a severe pneumonia, and only five of the fifty had had fever of less than 102.5 F. On the other hand, I am by no means convinced that a preexisting seborrhea played any great part, for twenty of the fifty stated that they had had practically no dandruff, and the scalps of twenty-two of the fifty were absolutely free from any local trouble, care being taken that in no instance were the scalps washed less than ten days before examination. The average time elapsing from the onset of the influenza to the beginning of the alopecia was nine weeks. The shortest time was two weeks, and the longest three months. The amount of hair lost varied greatly. In one case there remained only one tuft of hair on the back of the scalp, and as another extreme, not more than a tenth of the hair was lost. As nearly as can be estimated, largely from the thickness of braids, the average loss of hair was from one third to one half. As a rule only the long hairs fell, and these were almost immediately replaced by short hairs, so it is probable that new hairs simply push out the old hairs that have been damaged. The greatest loss of hair was usually over the anterior and parietal portions of the scalp. The alopecia was diffuse, not patchy, although in two cases there was a tendency toward patchiness. In one instance there was one completely bald area about 1½ inches in diameter. Only twelve of the patients complained of sensitiveness, either local or general, of the scalp. In forty-one cases both scalp and hair were abnormally dry.

Without exception every patient has developed new hair in a very short space of time; in fact, it would probably be difficult to prevent new hair from coming in.

The treatment is simple: First, the patient must be put in good physical condition and reassured that the prognosis is good. Next, the scalp must be cleansed of any seborrhea. This can usually be done by means of a sulphur ointment. Sufficient vegetable oil must be supplied to the hair to keep it glossy; this is best done by wetting slightly a cloth with the oil, and then rubbing it over separate strands of hair. Sufficient massage should be done twice a day to cause a brisk tingle of the scalp. When the scalp is cleansed of seborrhea, a simple stimulating lotion should be used at night. A dram of salicylic acid to 6 ounces of alcohol or bay rum will work perfectly well. There is not the slightest need for treatment with ultraviolet light or with any form of electrical stimulation. Also there is not the slightest excuse for cutting the hair, unless it be to make the ends even, so that it can be more easily dressed. In all cases a light hat should be worn so as not to interfere with circulation or ventilation.

Postinfluenzal alopecia differs in no wise from any other postfebrile alopecia. In practically all cases the prognosis is excellent. Simple cleansing of the scalp and a stimulating tonic with ordinary hygiene of the scalp is all the treatment required.

1621 Connecticut Avenue.

Central Council for Infant Welfare.—A Central Council for Infant and Child Welfare was inaugurated in London recently. The council consisted of representatives of various infants', children's, mothers' and allied organizations, thirteen in number. The object of the council are to coordinate the work of the various national and local voluntary organizations concerned in the care of motherhood, infancy and childhood by organizing the supply and distribution of funds and workers, both voluntary and salaried; to establish, supervise and maintain, with the help of government grants and payments by beneficiaries, such residential institutions or to make such other arrangements for the benefit of the mothers and young children as the constituent societies may from time to time find necessary; to provide and promote a standardization of training for social welfare workers in connection with motherhood, infancy and childhood, and to raise the status and remuneration of the workers. The chairman of the council is Sir Arthur Stanley, and the secretary is Miss Wilson; the offices for the time being will be at 83, Pall Mall.—*Medical Officer* **21**:122, 1919.

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[2] Baggerd: Zur Kenntnis der Massenblutungenins Nierenlager, Beitr. z. klin. Chir. **91**: 454, 1914.

[1] Morrisey, M. J.: Influenza Alopecia, J. Cutan. Dis. **37**: 177 (March) 1919.

[2] Jackson, G. T., and McMurtry, C. W.: A Treatise on Diseases of the Hair, Philadelphia, Lea & Febiger, 1912.

AN INDEX OF BODY RESISTANCE IN ACUTE INFLAMMATORY PROCESSES

AS INDICATED BY EXAMINATION OF THE BLOOD

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Hematology today is recognized as one of our most valuable aids in the diagnosis and prognosis of acute inflammatory processes. Still, we find many who are at a loss as to the significance and interpretation of blood pictures in any given condition. In many hospitals a total leukocyte count alone is made, even though it is a well recognized fact among hematologists that of the two parts of a blood picture, that is, total leukocyte count and differential count, the latter is by far the more valuable, while the most valuable data are obtained from the comparative relation of the total leukocyte count and the polymorphonuclear percentage.

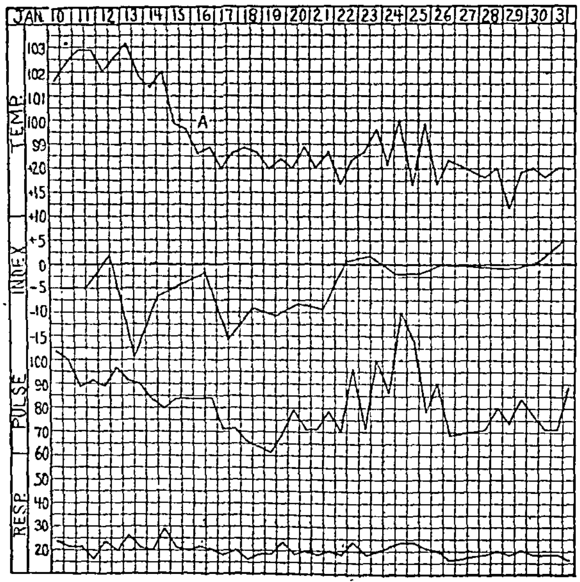

Chart 1 (Case 74).—Temperature, pulse, respiration and index on one chart in a case of influenzal pneumonia: *A*, lysis.

In the early days of blood counting when this branch of hematology was receiving a great deal of attention from investigators, Sondern[1] published a paper which stands out as a high light among the numerous ones appearing on the subject at that time. After careful blood examinations of more than 5,000 cases, including 1,415 surgical cases, he drew hypotheses that have stood the test of time.

His conclusions were in part as follows:

> Leukocytosis is largely dependent on body resistance toward infection, and therefore the degree of increase can be no guide to the intensity of the pathological process. Good resistance will produce pronounced leukocytosis, even in slight infections; and poor resistance, but little leukocytosis in slight infection, and possibly none at all in grave infections. . . .
>
> The quantitative relation or differential count of leukocytes offers a far better guide to the status of an inflammatory process, and is one which is not influenced to a perceptible degree by body resistance. Furthermore, the leukocytosis present with a given differential count is a direct indicator of body resistance, which may also be of great clinical value.

He very aptly divided blood findings into three distinct pictures:

1. A relative percentage of polynuclear cells below 70 with an inflammatory leukocytosis of any degree excludes the presence of gangrene or pus at the time the blood examination is made, and usually indicates good body resistance toward infection. For example: serous otitis media with a total leukocyte count of 28,400 and a percentage of polynuclears of 59.7; and acute appendicitis with a total leukocyte count of 25,100 and a percentage of polynuclears of 63.5.

2. An increased relative percentage of polynuclear cells with little or no inflammatory leukocytosis is still an absolute indication of inflammatory process, and the percentage is a direct guide to the severity of the infection. For example: pelvic abscess with 7,200 total leukocytes and 87 per cent. polynuclears; gangrenous appendicitis and spreading general peritonitis with a total of 13,200 leukocytes and 82.4 per cent. polynuclears, and brain abscess following mastoiditis with a total of 11,900 leukocytes and 82.3 per cent. polynuclears.

3. An increased relative percentage of polynuclear cells with a decided inflammatory leukocytosis (most cases like this).

Gibson,[2] making use of Sondern's hypothesis, after a study of several hundred blood pictures in appendicitis and other acute surgical conditions, evolved a "standard chart" which was cleverly arranged to show graphically the disproportion between total leukocyte and polymorphonuclear percentage in any blood examination. He found that "in acute inflammations which are well resisted, the polynuclears are increased approximately one degree per cent. for every one thousand of the total above 10,000." Using millimeter graph paper and allowing a square millimeter to represent each 1,000 increase of the total above 10,000 and likewise each degree per cent. increase above 75, he was able to follow from time to time the change in the "disproportion" in any condition. His conclusions were as follows:

> The differential blood count and its relation to the total leukocytosis is the most valuable diagnostic and prognostic aid in acute surgical diseases that is furnished by any of the methods of blood examination.
>
> It is of value chiefly in indicating fairly consistently the existence of suppuration or gangrene, as evidenced by an increase of the polynuclear cells disproportionately high as compared to the total leukocytosis. The greater the disproportion the surer the findings, and in extreme disproportion, the method has proved itself practically infallible.
>
> As the relative disproportion between the leukocytosis and the percentage of polynuclear cells is so much more valuable than the findings based on a leukocyte count alone, this latter method should be abandoned in favor of the newer and more reliable procedure.

However, Gibson's chart met with the objection that if many successive counts were entered on the same chart, it was apt to result in a jumble of lines that were difficult to follow. So Wilson[3] modified the "standard chart." After using it at the Mayo Clinic in several hundred cases, his conclusions were as follows:

1. Sondern's hypothesis, that the polynuclear percentage is an index of infection, the total leukocytosis an index of body reaction, and their proportionate relationship an index of resistance, seems to be supported. The more important exceptions to this are in moribund cases and perhaps children.

2. As practically applied in early appendicitis cases, a disproportional polynuclear increase, i. e., a rising resistance line,

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[1] Sondern, F. E.: Present Status of Blood Examinations in Surgical Diagnosis, M. Rec. **67**: 452-455 (March 25) 1905.

[2] Gibson, C. L.: Value of Leukocyte Count in Acute Surgical Disease, Ann. Surg. pp. 485-499, 1906.

[3] Wilson, L. B.: Value of Sondern's Differential Leukocyte Resistance Line in the Diagnosis and Prognosis of Acute Appendicitis, Collected Papers of the Mayo Clinics, 1905-1909, p. 280.

indicates a more or less severe infection, which is not being properly cared for by the body. The higher and longer this line, the more serious the case.

3. A proportional polynuclear percentage or a disproportional polynuclear decrease, if well marked, indicates mild or well-cared-for infection.

4. The value to the surgeon in early cases is but little, since most early cases are operated on anyway. It may be of some value negatively in indicating that a supposedly acute exacerbation of chronic appendicitis is not present.

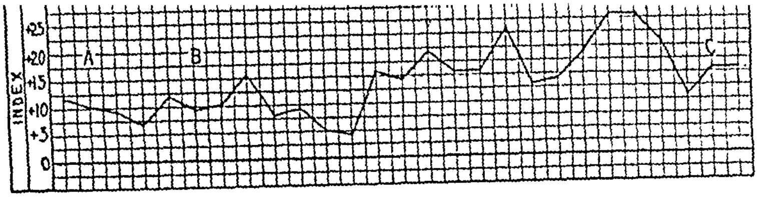

Chart 2 (Case 6).—Positive index of resistance in an uneventful convalescence in influenzal pneumonia: *A*, improving; *B*, good; *C*, lungs clear.

5. In cases between the fourth and eleventh days, the resistance line is of great value to the surgeon in indicating the patient's poor resistance and the necessity for immediate operation. The operative findings in the cases bear out the leukocyte determination with wonderful accuracy.

6. A horizontal or falling resistance line indicates that the patient is taking care of the infection. If the infection is severe, as shown by a high though falling line, the patient may perhaps best be given medical treatment rather than submitted to operation.

After further study of this subject, Sondern,[4] in a later paper, made the following observations which are significant in considering a blood picture from the point of view in question:

> The increase in the relative number of polynuclear cells is an indication of the severity of toxic absorption, and the degree of leukocytosis is an evidence of body resistance toward infection.
>
> Purulent exudates were rarely if ever present with low polynuclear percentage irrespective of the height of the leukocyte count, while high polynuclear percentages almost invariably indicated their presence, even if the total leukocyte count was low.

He also noted the following exceptions to the foregoing statement:

1. Children present a more variable normal polymorphonuclear percentage, and therefore Gibson's resistance chart is not applicable to them.

2. In conditions in which pus is confined so that no toxic absorption occurs, or when the purulent exudate is of tuberculous or typhoid origin, there is no leukocytosis and no polymorphonuclear increase.

3. Mixed infections with or following tuberculosis or typhoid does not show as high polymorphonuclear percentage as primary streptococcic or staphylococcic infections.

4. The exact nature of infection has direct bearing on the degree of polymorphonuclear increase, some organisms causing a higher percentage than others.

THE INDEX OF RESISTANCE

Sondern's hypothesis as applied by Gibson and modified by Wilson deserves a wider application and more general utilization in interpreting blood pictures. Perhaps the chief reasons that it has not been used are that the work is not generally known, and that such interpretation depends on the presence of the "standard chart." As these charts are not always at hand, and if used, require an extra sheet on the hospital record with that added expense, this very valuable aid has been neglected.

The "resistance line" is simply a visual expression of the disproportion between the total leukocyte count and the polymorphonuclear percentage, starting with the normal figures for these factors, and assuming that they normally increase in the ratio of 1 per cent. of polymorphonuclears to 1,000 total leukocytes per cubic millimeter. Therefore, we can express the same thing in the formula.[5]

$$(T-10)-(P-70)=\text{I. R.}$$

T is the digits in the thousandths place in any given leukocyte count; 10 is the digits in the thousandths place in the high normal leukocyte count; *P* is any given polymorphonuclear percentage; 70 is the high normal polymorphonuclear percentage; I. R. is the "index of resistance."

Example A:
Total leukocyte count.........15,000
Polymorphonuclear percentage.. 80
$(15-10)-(80-70)=-5$ I. R.

Simple mathematics reduces the foregoing formula to:

$$T-(P-60)=\text{I. R.}$$

Example A:
$15-(80-60)=15-20=-5$ I. R.

Example B:
Total leukocyte count.........25,000
Polymorphonuclear percentage.. 75
$25-(75-60)=+10$ I. R.

Example A would correspond to a rising resistance line, and Example B to a falling resistance line on the "standard chart."

In example A there is a disproportionate increase in the polymorphonuclears, or in other words, the severity of the infection is comparatively greater than the reaction of the body to it, with a consequent "negative index." In Example B there is a good reaction to a comparatively mild infection, with a resultant "positive index."

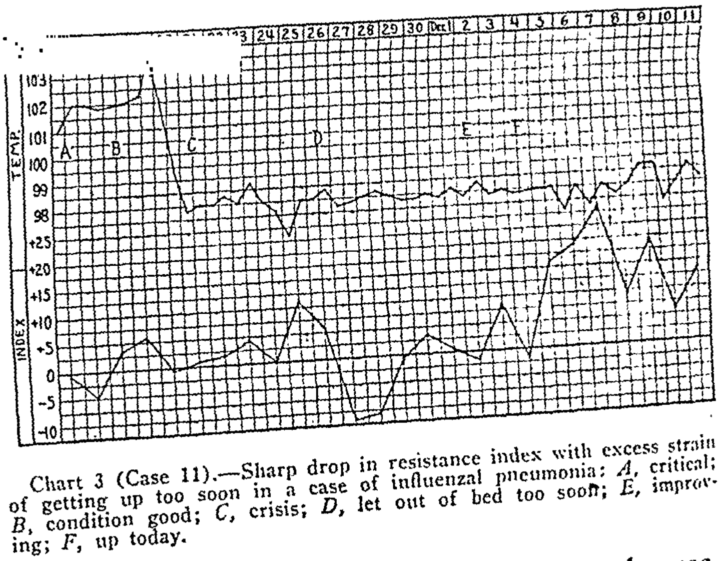

Chart 3 (Case 11).—Sharp drop in resistance index with excess strain of getting up too soon in a case of influenzal pneumonia: *A*, critical; *B*, condition good; *C*, crisis; *D*, let out of bed too soon; *E*, improving; *F*, up today.

Although there is a rather wide range in what is considered normal total leukocyte and polymorphonuclear counts, it was thought best to consider 10,000 as the extreme upper limit of normal total white count, and 70 per cent. as the corresponding polymorphonuclear normal.

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[4] Sondern, F. E.: The Value of the Differential Leukocyte Count in Diagnosis, Am. J. M. Sc. **32**: 889 (Dec.) 1906.

[5] Some time previous to my entrance into the army, Miss Marie Bump and I, at the Bierce Memorial Laboratory, St. Anthony's Hospital, Oklahoma City, evolved a formula which in a single figure essentially expresses the same thing as the "resistance line" of Gibson and Wilson.

Use of the formula *T*—(*P*—60)=I. R. gives one a quick and tangible interpretation of a blood picture in any acute inflammatory process. The positive or negative figures can be entered on a record sheet in a vertical column from day to day, and a glance down the column quickly gives one an idea of the blood resistance index. Or the index figure may be plotted daily along with temperature, pulse and respiration, and so produce a graphic picture corresponding with these signs (Chart 1).

At any time one can readily calculate mentally the index from any white and differential count, and thus quickly decide the diagnostic or prognostic value of the blood picture.

Although this study includes no observations in acute surgical cases, the index is obviously of the same value in this class of cases as the Gibson "standard chart." As this has already been used extensively and the statements of the early workers corroborated, it was not thought necessary to include any such cases here.

This study includes observations in 105 cases of various diseases, thus distributed: pneumonia, forty-six; influenza, thirty-five; empyema, twelve; measles, twelve.

The work was begun with the purpose of determining the value of the index of resistance as an aid in prognosis, and in the early detection of complications, such as empyema and otitis media. Incidentally, other interesting observations have been made.

Daily total leukocyte counts and differentials were made in each case for periods varying from three to sixty-five days. Counts were begun on the same day the patient entered the hospital in nearly all cases, and the study was terminated either by death of the patient or dismissal from the hospital; or, the convalescence being well advanced, it was considered unnecessary to follow the case farther. Eight large squares on a Levy hemocytometer were counted in the estimation of the number of total white cells, and 300 cells were counted in each differential. Particular attention was given to obtaining even, uniform blood smears. Blood was collected at approximately the same time each day from any given patient, thus ruling out any changes that might arise due to exercise, meals, baths, etc. Our patients were all men between the ages of 21 and 31 years. Each day the clinical condition temperature, pulse and respiration were checked up with the blood findings. Altogether 1,710 total leukocyte and 1,710 differential counts were made.

RESULTS IN PNEUMONIA

Of the forty-six pneumonia patients observed, seventeen died, twenty made a more or less uneventful recovery, and the remaining nine developed complications and intercurrent infection. Of those who died, four developed empyema during the course of the pneumonia.

In all cases of uneventful recovery, the index became positive and remained so (Chart 2). Often this was quite high early in convalescence, but gradually came back toward the normal.

In seventeen cases terminating in death during the acute stage of the disease, the index was very markedly negative, and in general the lower the index the more critical the condition of the patient appeared. In most instances, this negative index continued to the end. However, in six out of seventeen deaths, there was observed a sharp and marked antemortem rise to positive. This occurred usually from twenty-four to forty-eight hours prior to death.

In the event of an intercurrent infection occurring during convalescence, or the onset of a complication, a positive index suddenly became negative and remained so for several days before the body apparently won the battle and the index again rose to plus. A similar phenomenon was seen in a case in which the patient was allowed out of bed too soon (Chart 3). In cases of empyema or purulent otitis media which were undrained for some time, the index curve was of an irregular saw-tooth character, rising above and dropping below the zero line, not unlike a septic temperature curve (Chart 4). With complete drainage, the curve rose to positive.

The blood index is as sensitive an indication of trouble as the temperature curve or other clinical signs. A negative index was observed coincidentally with a rise of temperature in a number of cases, and often slightly before the temperature was affected. Moreover, in convalescents who were not improving as rapidly as was expected, a hyperleukocytosis and a negative or irregular index were noted to persist long after the temperature, pulse and respiration had become normal. Often, no other signs of trouble could be found besides the blood picture and the apparent

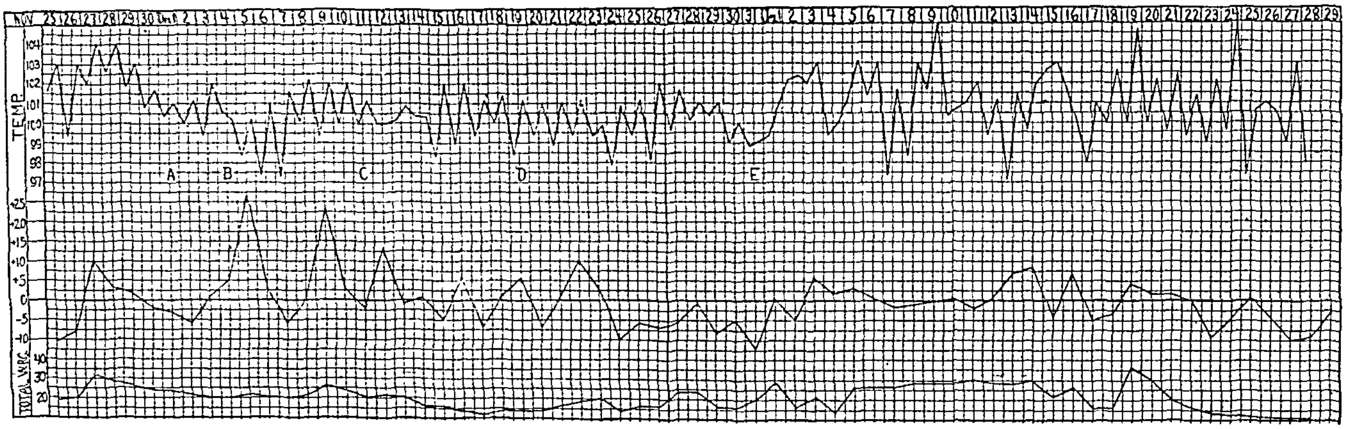

Chart 4 (Case 16).—Temperature, index of resistance, and total leukocyte count in a case of influenzal pneumonia with complications of acute suppurative otitis media and bilateral empyema: *A*, discharge from right ear; *B*, paracentesis, right ear; *C*, swelling and pain in right leg; *D*, no fluid on aspiration; *E*, pus on aspiration and costatectomy discovered clinically. At necropsy there was bilateral empyema; one side undrained.

lack of response on the part of the patient (Chart 1). This feature was noted particularly in influenza and measles cases.

RESULTS IN INFLUENZA AND MEASLES

The blood picture in these two conditions was so similar that we can easily discuss them together. Development of complications or the onset of other mild infections, such as bronchitis, alveolar abscess, tonsillitis and arthritis, was marked by a sudden drop of the leukocytic index to negative, returning in a few days to positive, apparently as the resistance of the individual increased and overcame the infection (Chart 5). In these conditions, a negative index was frequently seen to persist for days after the temperature, pulse and respiration became normal. This occurred in that class of individuals who do not "pick up" readily after measles and influenza, but continue weak and languid and altogether "below par." As these patients improved, the index gradually rose to positive (Chart 1).

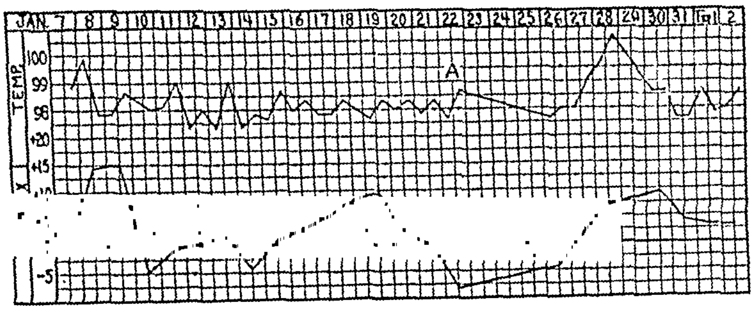

Chart 5 (Case 69).—Index the first sign of trouble in a case of influenza with arthritic complications: *A*, arthritis, discovered clinically.

Early in influenza and measles the total leukocyte count was normal or slightly reduced. Only one in thirty-five cases of influenza and two in twelve cases of measles showed a hypoleukocytosis below 5,000 per cubic millimeter. On the other hand, after the disappearance of the acute symptoms and during convalescence, it was not unusual to find the count ranging anywhere from 12,000 to 25,000 cells per cubic millimeter. Parallel to this the temperature, pulse and respiration were normal, or nearly so, and in most cases no cause for the hyperleukocytosis could be found. In a few cases, mild infections, such as chronic catarrhal pharyngitis, chronic tonsillitis, and chronic apical abscesses about the teeth, were the only apparent cause. Influenza and measles appear to render the hematopoietic organs very sensitive to even the slightest stimuli from the mildest infections, to which they respond with unusually high production of polymorphonuclear cells.

RESULTS IN EMPYEMA

In empyema that was draining well and in which the body was overcoming the infection, the blood index remained steadily positive. However, if an acute disease, such as tonsillitis, occurred during such a convalescence, the index dropped suddenly and often before any other signs appeared (Chart 6). In cases of incomplete drainage, such as those with walled off pockets, or clogging of the drainage tube or its displacement, the index was prone to simulate a septic temperature curve.

Eosinophilia was a rather common occurrence in our empyemas. In seven out of fourteen cases, eosinophils appeared in percentages varying from 6 to 31.

COMMENT

It is estimated that with the most careful and skilful technic, the factor of error in the total white count is about 5 per cent. With careful, even preparation of smears, the error of differential counting is no more than 2 per cent. Allowing for these factors of error, there should be a variation of no more than three or four points from day to day in the index, other things being equal. Practically, there is actually a daily fluctuation of from five to eight points, which must be considered in the interpretation of any given blood picture. There is probably a slight normal variation from day to day in the total leukocyte and polymorphonuclear count for any given individual. Generally speaking, the greater the departure from the normal, the more significant the index. Also, just as a single temperature observation is of comparatively small value in judging the course of any given condition, so a single blood picture is not to be relied on. A daily blood picture is ideal, but may encounter objections on account of the large amount of work involved. However, an index determination every second or third day during the course of the acute infectious diseases is desirable and not at all unreasonable.

There is a very wide variation in the absolute response of the leukocytes to any infection independent of the severity of the infection, and therefore the total leukocyte count when taken alone is of little or no value in getting at the exact condition of the patient, or the degree of the infection.

It might be well to warn against dogmatic dependence on the index alone. It should be used only as a *factor in completing* the study of any given case, and should always be considered in the light of other clinical and laboratory findings.

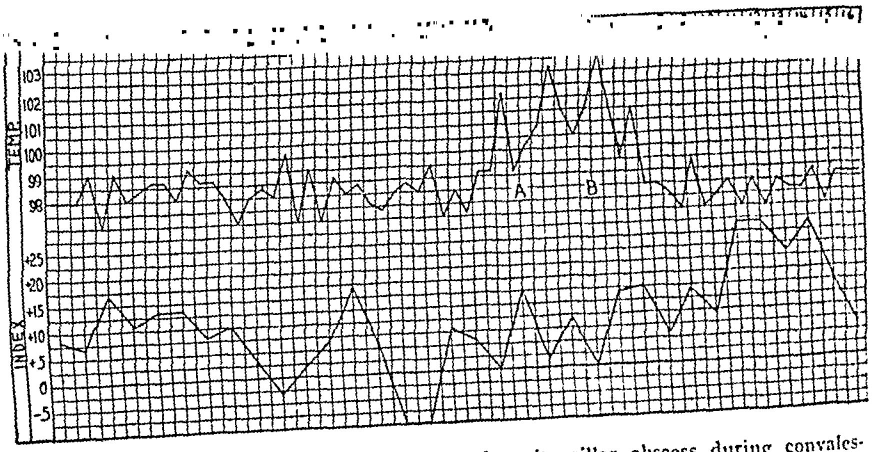

Chart 6 (Case 4).—Empyema; tonsillitis and peritonsillar abscess during convalescence; negative index four days before other signs of tonsillitis; *A*, tonsillitis; *B*, peritonsillar abscess.

I feel that this study has not been exhaustive enough to determine the true value of the leukocyte index in pneumonia, influenza, measles and empyema, and this report is made with the hope that others will help by trial in this determination and possibly find assistance in its application.

CONCLUSIONS

When used alone, neither the total leukocyte nor the differential count will give the examiner a true idea of the degree of an infection or the condition of the patient.

Sondern's hypothesis that the proportional relation of the total leukocytes and the polymorphonuclear percentage is an index of body resistance seems to be true.

A ready and tangible method of determining the degree of resistance from the leukocytic examination, that is, total leukocyte and polymorphonuclear percentage, is afforded by the index of resistance, which expresses essentially the same thing as Gibson's "resistance line," but is a more accessible means of interpreting a blood picture than the "standard chart."

The index of resistance has the same value in acute surgical conditions as Gibson's "resistance line."

The blood index is as sensitive an indication of change in the condition of an acute inflammatory process as the temperature curve and other clinical signs. In some instances it has seemed to be more delicate than any other sign.

In acute infectious diseases, such as pneumonia, influenza, and measles, the leukocyte index is of value chiefly as a danger signal of the onset of septic complications. The lower and more persistent the index, the more certain is the sign and the more serious is the condition.

THE BLOOD PICTURE OF THOSE INOCULATED WITH INFLUENZA VACCINE *

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One of the most widely discussed questions at the present time is the relation, if any, that exists between *B. influenzae* (Pfeiffer's bacillus) and the recent pandemic. From the bacteriologic point of view it would seem that many investigators throughout the world have serious doubts as to the etiologic significance of the influenza bacillus in this condition. Many believe that some form of micrococcus is the exciting agent, while other well-known men, such as Hektoen and Vaughan, state that it is "a disease of unknown origin."

In the clinical reports of the epidemic, the majority of observers agree as to the presence of a more or less well-marked leukopenia. Little, Garofalo and Williams[1] report that the present epidemic is not characterized by a sharp leukocytosis and polynucleosis, but rather by a very slight leukocytosis with a proportional lymphocytosis of the small mononuclear variety. Keegan,[2] in the examination of twenty-eight early cases from the first to the fourth day, found an average count of 6,700 white blood cells with 63.7 per cent. polymorphonuclears and 33.3 per cent. lymphocytes. He states that the white blood cell count in uncomplicated cases is below the normal. Nuzum, Pilot, Stangel and Bonar[3] noted that blood counts taken early after the initial symptoms exhibit a striking leukopenia as low as 1,800 and averaging from 3,000 to 4,000. With the onset of pneumonia, a definite leukocytosis quite commonly appears. Strouse and Bloch[4] note that a leukopenia was the rule, except when an empyema developed. Keeton and Cushman[5] report that influenza has a high (46.6) percentage of leukopenia in the early stages. Blanton and Irons[6] made white blood cell counts in 580 cases in the prepneumonia stage, of which 70 per cent. showed less than 8,000 white cells. This leukopenia was the most impressive feature of the blood count. The polymorphonuclears showed but slight increase over the normal, nor was there any conspicuous lymphocytosis. Of 1,000 white cell counts in pneumonia patients, 67.5 per cent. showed 8,000 or less. Ely, Lloyd, Hitchcock and Nickson[7] state that of seventy-five white cell counts, twenty-five gave 5,000 or less, thirty-four between 5,000 and 10,000, and sixteen over 10,000. Brem, Bolling and Casper[8] found that in the influenzal stage leukopenia was practically always present, and at first it appeared to be a feature of the pneumonia stage. The average count in eighty-six influenza cases was 6,000, and in 148 pneumonia cases 6,800. Synnott and Clark[9] made counts in more

TABLE 1.—RESULTS OBTAINED IN ONE HUNDRED AND FIFTY-EIGHT CASES AT VARYING PERIODS AFTER INOCULATION

Character of Case Counted	Number of Cases	Average Age	Total: Red Blood Cells	Total: White Blood Cells	Differential: Neutrophils	Differential: Eosinophils	Differential: Basophils	Differential: Lymphocytes	Differential: Mononuclears
Normal	1	22.0	4,680,000	6,800	62.0	5.0	1.0	30.0	2.0
Influenza	11	26.3	4,985,000	8,041	62.5	1.6	0.0	32.2	3.7
Influenza and inoculation	3	31.7	4,660,000	5,417	61.0	0.7	0.0	35.3	3.0
Inoculation alone:									
After first	4	28.7	5,130,000	10,050	71.8	1.2	0.0	22.7	4.3
After second	7	29.7	5,501,000	13,190	72.5	0.0	0.0	25.5	2.0
After third:									
1 day	5	31.4	5,104,000	9,116	62.2	1.4	0.0	31.2	5.2
2 days	2	29.5	5,100,000	10,500	65.0	3.0	0.0	28.0	4.0
3 days	1	21.0	4,720,000	7,000	63.0	1.0	0.0	36.0	0.0
4 days	14	27.8	4,972,000	8,480	62.4	2.8	0.3	32.1	2.4
5 days	16	26.9	4,708 000	7,341	63.3	2.2	0.2	31.6	2.7
6 days	18	25 8	4,929,000	7,531	63.1	3.1	0.3	30.6	2.9
7 days	1	33.0	5.200.000	9,700	83.0	0.0	0.0	15.0	2.0
8 days	3	35.0	5,140 000	7,717	63.7	0.3	0.0	33.7	2.3
9 days	17	24.2	4,850,000	8,480	62.5	0.7	0.4	34.4	2.0
10 days	10	29.4	4,837,000	9,140	64.7	0.7	0.2	31.2	3.2
11 days	14	27.7	4 510 000	9,186	61.8	0.4	0.4	35.4	2.0
12 adys	10	30.2	5,343,000	9,320	67.0	0.3	0.2	30.3	2.2
13 days	1	40.0	4,680,000	8,200	64.0	0.0	1.0	34.0	1.0
14 days	1	45.0	4,760 000	11,700	70.0	1.0	0.0	27.0	2.0
15 days	3	31.3	4,733,000	7,300	62.0	1.3	0.0	34.4	2.3
16 days	4	32.3	5,335,000	6,438	66.7	0.3	0.0	31.0	2.0
17 days	1	34.0	3,990,000	7,800	59.0	1.0	2.0	34 0	4.0
18 days	1	22.0	4,320 000	7,200	71.0	1.0	0.0	25.0	3.0
19 days	3	25.0	5,030 000	8,900	68.7	0.7	0.3	27.0	3.3
20 days	2	29.0	5,705,000	5,500	46.0	2.0	0.5	51.0	0.5
21 days	2	23.5	4,035 000	7,700	64.0	0.5	1.0	33.5	1.0
22 days	1	28.0	4,640,000	7,600	69.0	0.0	0.0	28.0	3.0
30 days	1	22.0	4,880,000	7,500	58.0	1.0	0.0	40.0	1.0
32 days	1	26.0	5,840,000	8,200	57.0	1.0	0.0	41.0	1.0
Total	158	27.8	4,940,000	8,451	63.6	1.4	0.3	32.1	2.6

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*From Yale Army Laboratory School.

[1] Little, Garofalo and Williams: Lancet **2**: 34 (July 13) 1918.

[2] Keegan, J. J.: Prevailing Pandemic of Influenza, J. A. M. A. **71**: 1051 (Sept. 28) 1918.

[3] Nuzum, J. W.; Pilot, Isadore; Stangel, F. H., and Bonar, B. E.: Pandemic Influenza and Pneumonia in a Large Civil Hospital, J. A. M. A. **71**: 1562 (Nov. 9) 1918.

[4] Strouse, S., and Bloch, L.: Notes on the Present Epidemic of Respiratory Disease, J. A. M. A. **71**: 1568 (Nov. 9) 1918.

[5] Keeton, R. W., and Cushman, A. B.: The Influenza Epidemic in Chicago, J. A. M. A. **71**: 1962 (Dec. 14) 1918.

[6] Blanton, W. B., and Irons, E. E.: Preliminary Laboratory Report of a Recent Epidemic of Acute Respiratory Infection at Camp Custer, Mich. J. A. M. A. **71**: 1988 (Dec. 14) 1918.

[7] Ely, C. F.; Lloyd, B. J.; Hitchcock, C. D., and Nickson, D. H.. Influenza as Seen at the Puget Sound Navy Yard, J. A. M. A. **72**: 24 (Jan. 4) 1919.

[8] Brem. W. V.; Bolling, G. E., and Casper, E. J.: Pandemic "Influenza" and Secondary Pneumonia at Camp Fremont, Calif., J. A. M. A. **71**: 2138 (Dec. 28) 1918.

[9] Sinnott, M. J., and Clark, E.: Influenza Epidemic at Camp Dix, N. J., J. A. M. A. **71**: 1816 (Nov. 30) 1918.

than 700 cases and found an absence of leukocytosis in the more severe ones, and during the acute stage of those running a more favorable course. The average white cell count during the acute stage was about 5,000, the lowest recorded being 1,200. Gotch and Whittingham[10] found a distinct leukopenia (3,000 to 4,500) at the height of the fever. Cole[11] found that there was usually a leukopenia of from 2,400 to 9,000 in purely toxic cases, and even in extensive bronchopneumonia.

TABLE 2.—RELATION EXISTING BETWEEN THE DEGREE OF REACTION AND THE BLOOD CHANGES

Reaction	Cases	Per Cent.	White Blood Cells	Total Polymorphonuclears	Total Mononuclears	Age	Days After Inoculation
++	16	11.2	8,765	66.5	33.5	32.2	7.9
+	7	4.9	7,890	65.0	35.0	29.5	8.4
±	21	14.7	8,647	66.3	33.7	30.5	11.0
No reaction	99	69.2	8,563	65.2	34.8	26.5	9.0

In averaging, as well as possible, the figures given in the foregoing quotations, we get a white blood cell count of approximately 5,700 per cubic millimeter. As one of the methods employed in combating this epidemic was the use of an influenza vaccine made up of numerous strains, it was thought that some information might be obtained by making white cell counts of those who received the vaccine. If the primary infecting agent was the bacillus of Pfeiffer, and if, according to the clinical reports, such infection was accompanied by a leukopenia, it would seem logical to suppose that the injection of the organisms should cause a more or less similar reaction.

TABLE 3.—DISTRIBUTION OF WHITE CELLS IN FORTY-EIGHT OFFICERS

Number of Cells	Counts	Per Cent.
Below 6,000	5	10.4
6,000 to 7,000	4	8.3
7,000 to 8,000	17	35.4
8,000 to 9,000	6	12.5
9,000 to 10,000	5	10.4
10,000 to 12,000	5	10.4
12,000 and up	6	12.6
Total	48	100.0

Average age, 34.9 years.
Days after inoculation, 10.98.

TABLE 4.—DISTRIBUTION OF WHITE CELLS IN ONE HUNDRED AND TEN ENLISTED MEN

Number of Cells	Counts	Per Cent.
Below 6,000	5	4.5
6,000 to 7,000	22	20.0
7,000 to 8,000	32	29.0
8,000 to 9,000	21	19.1
9,000 to 10,000	10	9.1
10,000 to 12,000	13	11.8
12,000 and up	7	6.5
Total	110	100.0

Average age, 24.7.
Days after inoculation, 7.71.

The present report gives the results of blood counts made in 158 cases—110 enlisted men and 48 officers. Of this number, 143 were apparently normal individuals who had received the influenza inoculation. Of the remaining fifteen, there were eleven who had had influenza, three who had had influenza and the inoculation as well, and one who had had neither the disease nor the inoculation. This work was done during November, 1918, at the Yale Army Laboratory School, New Haven, Conn., Col. Charles F. Craig, M. C., in command.

From an examination of the accompanying tables, it would seem that there was little effect, if any, on the total count of white cells, or on their relative percentages. Nor does the length of time intervening after the inoculations make any difference. There also seemed to be no relationship between the severity of the reaction and the number of white cells, those having no reaction giving practically the same average as those having the most severe.

TABLE 5.—FINAL AVERAGES OF DISTRIBUTION OF WHITE CELLS FOR TOTAL OF ONE HUNDRED AND FIFTY-EIGHT COUNTS MADE

Number of Cells	Counts	Per Cent.
Below 6,000	10	6.3
6,000 to 7,000	26	16.4
7,000 to 8,000	49	31.0
8,000 to 9,000	27	17.1
9,000 to 10,000	15	9.5
10,000 to 12,000	18	11.3
12,000 and up	13	8.3
Total	158	100.0

Average age, 27.8 years.
Days after inoculation, 8.73.

The final average gave a total of 10,000 white cells per cubic millimeter for the officers, and 7,700 for the enlisted men.

A study of the tables would indicate that *B. influenzae* when injected subcutaneously into an individual does not have any effect on the tissues concerned in the formation of the white cells. That it is not due to a lack of effect on the individual is shown by the fact that even in those instances in which there was a marked constitutional reaction there were still no changes in the blood picture. Since the general opinion of clinicians is that a leukopenia is one of the characteristic findings in the recent epidemic, it would seem justifiable to consider the findings here reported as an additional argument against the bacillus of Pfeiffer being the causative agent.

TABLE 6.—SUMMARY OF FINDINGS IN THE ONE HUNDRED AND FIFTY-EIGHT CASES EXAMINED

Character of Cases Counted	Number of Cases	Average Age	Total		Differential				
			Red Blood Cells	White Blood Cells	Neutrophils	Eosinophils	Basophils	Lymphocytes	Mononuclears
Total	158	27.8	4,940,000	8,451	63.6	1.4	0.3	32.1	2.6
Inoculations only	143	27.9	4,944,000	8,565	63.9	1.4	0.2	32.0	2.5
Not inoculated	15	27.1	4,896,000	7,374	62.1	1.6	0.1	33.1	3.2
Total officers	48	34.9	5,125,000	10,000	65.6	0.4	0.2	31.5	2.3
Total enlisted men	110	24.7	4,859,000	7,776	63.0	1.8	0.3	32.4	2.7

Counts taken on officers on average of 10.98 days after last inoculation.

Counts taken on enlisted men on average of 7.71 days after last inoculation.

Beginning of Epidemics.—Consider every case of typhoid you discover as the first one of an epidemic.—*Weekly Bulletin, A. E. F.*

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[10] Gotch and Whittingham: Brit. M. J. 2: 82 (July 27) 1918.
[11] Cole: Brit. M. J. 2: 566 (Nov. 23) 1918.

Clinical Notes, Suggestions, and New Instruments

A ONE-PIECE SURGICAL OPERATING SUIT

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All surgeons have doubtless experienced the inconvenience of having buttons drop off of operating suits at inopportune moments. Some may have also found separate trousers a disadvantage. To such the one-piece suit here described and illustrated will surely appeal. This one-piece suit has no buttons, but is secured by two tapes. It is adjustable to considerable variations in size, although in a large service it may be well to provide two sizes. The idea for this garment was developed by Mrs. T. H. Hinman and the supply was furnished by the Atlanta branch of the Red Cross. We feel greatly indebted to the designer and to the Red Cross for developing and supplying us with this garment, which we find very useful and convenient.

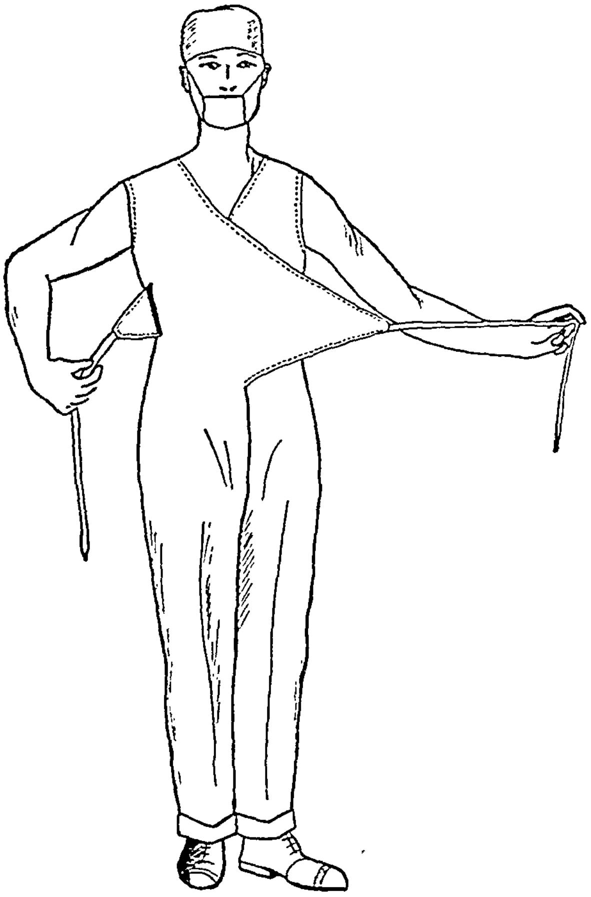

Fig. 1.—The manner of securing the one-piece surgical operating suit by two tapes.

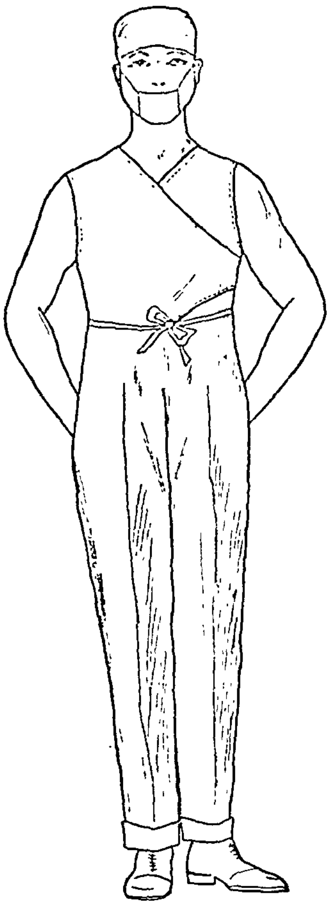

Fig. 2.—The manner of tying the tapes in front.

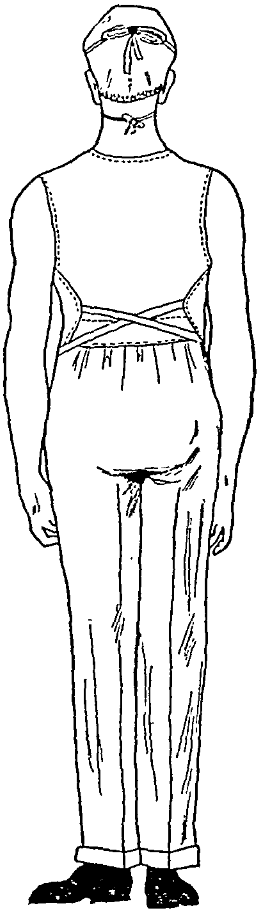

Fig. 3.—The manner of adjusting the tapes at the back.

TUBERCULIN TREATMENT OF TUBERCULOUS EPIGLOTTIS

Herbert F. Gammons, M.D., Carlsbad, Texas

The tissue changes resulting from injection of tuberculin in or near tuberculous foci have been most remarkable in some instances.

White and Marcy[1] report good results from such treatment of a tuberculous tongue; Patterson[2] gives his final results in eye conditions treated similarly, and Pottenger[3] remarks on the good results obtained in laryngeal cases treated by tuberculin locally.

The following case is of interest and study of similar cases may help us to get a better understanding of immunity in tuberculosis:

S. A., showing a moderately advanced case running normal temperature and pulse, complained of irritation in the throat. Examination of the larynx revealed a localized area of inflammation on the upper right of the epiglottis posteriorly. This was treated with different local applications, but regardless of treatment the area extended and ulceration with slight edema resulted. Amputation was considered, but it was thought best first to try tuberculin.

March 15, 0.00001 mg. bacillary emulsion was injected at the base of the ulcer. In twenty-four hours there was a slight local reaction with some swelling and redness and slight elevation of temperature. Four days later 0.0001 mg. of the same variety of tuberculin was injected. One week later 0.001 mg. of the same variety of tuberculin was injected. In twenty-four hours a marked general and local reaction resulted. The epiglottis was markedly swollen, deglutition was difficult and temperature went to 104 F. Fever rapidly subsided as did the swelling in the epiglottis. The ulcerated area is now covered with new epithelium, and there is no evidence of acute inflammation. The epiglottis on the right side is a trifle thicker, but there are no subjective symptoms referable to the larynx. The patient's general condition is better than before the reaction. The patient was taking artificial pneumothorax at intervals during the treatment.

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[1] White, W. C., and Marcy, C. H.: Bull. Johns Hopkins Hosp. 77: 174 (May) 1917; abstr. J. A. M. A. 68: 1663 (June 3) 1917.

[2] Paterson, R. C.: Am. Jour. Med. Sc. 157: 198 (Feb.) 1919; abstr. J. A. M. A. 72: 875 (March 15) 1919.

[3] Pottenger: Clinical Tuberculosis, St. Louis, C. V. Mosby Company, 1918.

Effect of Child Hygiene.—The child hygiene work that saves babies increases the health and the welfare of mothers and children.—*Public Health News*, New Jersey.

Special Article

HOSPITAL SERVICE IN RURAL COMMUNITIES

A PRELIMINARY REPORT

Prepared by Ernst C. Meyer, Director of the Department of Surveys and Exhibits of the Rockefeller Foundation International Health Board

New York

(Concluded from page 1367)

PART IV. LEGISLATION CONCERNING RURAL HOSPITALS

LAWS MAKING THE ESTABLISHMENT OF COMMUNITY HOSPITALS OPTIONAL

Iowa was the first state to pass a law allowing counties to tax themselves for the purpose of providing hospitals. The Munger bill, passed in 1909, provides that any county by a vote of its electors may levy a tax for the building, equipment, and maintenance of a county general hospital for the care of all classes of the sick, particularly the tuberculous.

Michigan, in 1909, also passed a law allowing county supervisors to raise a tax for constructing or maintaining or assisting to construct and maintain a hospital or sanatorium. In 1913, this law was amended so that 5 per cent. of the county electors could petition the supervisors to issue bonds and levy a tax for establishing and maintaining a public hospital. Such a petition then required submission to a general vote.

Indiana passed a state law in 1913 allowing the necessary funds for county hospitals to be raised by a tax levy and bond issue. In the same year, North Carolina permitted counties to vote on bond issues for the establishment of county or community hospitals. In 1915, Kansas passed a law along similar lines which allowed cities with the commission form of government, and with a population of from 3,000 to 6,000, to levy a tax for equipping and maintaining a hospital. Missouri, New York, and South Carolina have enacted laws resembling that in force in Iowa. The New York state law is a township law. In addition, Colorado, Idaho, Maryland, Montana and Vermont have passed laws authorizing cooperation in hospital construction on the part of different counties, cities, and towns.

LAWS MAKING THE ESTABLISHMENT OF COMMUNITY HOSPITALS COMPULSORY

A compulsory law for the establishment of county hospitals was passed in Texas only. This law, enacted in 1913, makes it mandatory for counties of more than 20,000 population to build and operate general hospitals, and compels them to tax themselves. Counties of less than 20,000 are permitted to join with other counties, taxing themselves pro rata to help pay for both hospital construction and operation.

EFFORTS TO SECURE LEGISLATION CONCERNING HOSPITALS

The people of Mohave County, Arizona, at a recent election adopted a resolution petitioning the state legislature to pass a law authorizing county boards to establish hospitals in which persons, whether able or unable to pay for treatment, might be accepted.

The Northwestern Nebraska Medical Society recently petitioned the legislature of the state to enact a measure enabling cities of the second class to vote bonds and levy a tax for the establishment of hospitals. The proposed measure is modeled on the Iowa county hospital law except that it enables municipalities instead of counties to erect and operate the hospitals.

Pennsylvania has introduced a bill for the establishment of a cottage state hospital at Honesdale. South Dakota and Utah have drafted bills for the establishment of county hospitals. It was also reported that the legislature of Utah would be called on to consider a county hospital bill.

POPULAR ACTION UNDER HOSPITAL LAWS

Nov. 8, 1910, eight counties in Iowa asked for a vote concerning hospitals. Washington County was the only one that succeeded in having the tax levied. The hospital is reported to have been a success from the start. In the same year that the Washington County Hospital was opened, a further county hospital was being built for Jefferson County. Up to December, 1916, so far as is known, the hospital issue was before the people for a vote in twenty-two counties. It was defeated in twenty counties and carried in the two counties mentioned above.

It is not known what progress was made in Michigan. Indiana has two county hospitals, at least one of which, the Bartholomew County Hospital, was opened in December, 1916, shortly after the bill had passed. Kansas has two county hospitals, but it is not known whether they were opened before or after the passing of the law. The same applies to the Anderson County Hospital in South Carolina. In North Carolina, two counties (North Hampton and Pitt) waged campaigns but lost the election. In one county (Lenoir) the bond issue was voted. No hospitals had been built in this state up to March 7, 1917.

According to latest reports, the compulsory hospital law in Texas was in full operation. The law specified that the following cases were to be cared for in these hospitals; medical, surgical, gynecologic, obstetric, children, tuberculosis, and the communicable diseases. Construction of hospitals of this type is now under way in various parts of the state.

PART V. SOME THINGS THAT NEED TO BE KNOWN TO SOLVE THE COMMUNITY HOSPITAL PROBLEM

In its simplest elements, the hospital problem resolves itself into two parts: provision of the hospital plant in which service is to be rendered, and provision of the services for which the plant is created. The provision of the plant in turn resolves itself into two subsidiary problems: How large shall the building be, that is, how many beds should the hospital contain, and where should it be located? A correct answer to the first question is desirable in order that there may be economy in the use of funds. A correct answer to the second question is desirable in order that the community may be served with the least possible waste in time and money, and the smallest individual inconvenience or effort. In seeking an answer as to the size of the building, it is necessary to gain a definite idea concerning the extent of hospital needs. This presupposes, first, a sickness rate formula, and second, a hospital case formula, the latter obviously being dependent on the former. Unfortunately, as emphasized in Part I, little information is at present available concerning either the rate of sickness or the proportion of all cases of sickness that should have hospital treatment. Estimates and guesses have frequently been made, but they are not based on definite statistical data.

Before a correct sickness rate formula can be worked out, it will be necessary to secure facts which will serve to indicate the trend of sickness in the future. A hospital is not a thing of a day. It is intended to endure through many years, and even generations. Decrease or increase in sickness, were it to follow a definite course, might be a matter of serious import in the original planning of the building.

It is well known that the trend of the death rate among modern civilized populations is steadily downward. It would seem to follow that the sickness rate will likewise continue to be downward. There are, however, numerous uncertain elements. The speed of this downward tendency, as is obvious, will depend, among other things, on the accomplishments of scientific medicine and their application in a practical way, both through the medium of the private practicing physician and of the public health officer. Striking results have been secured in the recent past. It is not unlikely or improbable that further startling advances will be made particularly in the control of communicable disease. All calculations as to the extent of the need of hospital facilities may be upset. Increased ability in the control of constitutional diseases, and the elimination of chronic cases, coupled with the awakening of the population to the importance of these diseases, may also radically affect any hospital case formula that might be established at the present time.

In establishing a hospital case formula, numerous other difficulties are encountered. Whether or not a given case needs hospital care may depend on many factors—nature of sickness, availability of physician's care or of nursing care, home conditions, the ability of the patient to stand transportation, the distance of transportation, etc. Any hospital case formula which might be established would need to be modified to suit a particular community, and to meet the peculiar conditions that may prevail there. Clearly, communities differ in matters of health as in matters of wealth, and in other things. The most important factors to be considered are the death rate, character of population with respect to wealth, probable increase or decrease in the population of the area to be served, social conditions, percentage of the foreign group, degree of prejudice against hospital service, character of industries and industrial diseases, prevailing types of general diseases, etc.

A reasonable answer to the question of the size of a hospital plant is of importance mainly in two ways. If the plant is too small, the services it can render will not be complete. There are apt to be unnecessary deaths in the community, some unnecessary prolongations of sickness, and some unnecessary temporary or permanent disabilities. If, on the other hand, the plant is built too large, money will have been wasted in its construction, and money will continue to be wasted in its maintenance as long as the building stands.

LOCATION OF HOSPITAL

The problem of location is second only to that of size and arrangement. It is a matter that cannot be lightly disposed of, although abundant instances appear on record in which little thought has been given to it, and in which the whim or prejudice of some local philanthropist has fixed the place to put it. Attention need be given to the location of other hospital facilities and their character, together with the extent to which they draw on local needs; the distribution and shifting of population together with possible increase and decrease; the convenience of the medical profession, and the promptness of medical aid in emergency; current transportation facilities, with forecast of future developments; topography and healthfulness of the region; and proximity of industrial enterprises.

MAINTENANCE

Of equal importance with the mere establishment of a plant is provision for its maintenance; yet it has been the history of small hospitals that adequate provision for maintenance has frequently not been made, with the result that many of them have soon found themselves on the rocks, and have dragged through discouraging years, too weak financially to be properly equipped and maintained, and with too inadequate service to attract the revenues which might keep them on their feet. From what facts are available in the printed records, few hospitals have encountered serious difficulties when proper provision for their maintenance has been made.

RENDERING HOSPITAL SERVICE

Considerable difference of opinion appears to prevail as to the best organization of medical service of the community hospital. There are advocates of the so-called "closed staff" system, under which the hospital medical service is administered by a permanent paid staff which takes care of all patients brought to it. Others favor the "open staff" system, under which any physician of the community may bring his patient to the hospital and continue his care until convalescence or death. There are also modifications of these two systems under which a hospital superintendent, often a surgeon, and occasionally certain assistants, supervise all medical service within the hospital, and strive in varying measure to secure certain standards of service.

According to the history of hospitals thus far established in small communities, the solution of the hospital staff question seems to be one of the most difficult that confront hospital administrators. This arises largely from the fact that the good will and cooperation of the local medical profession is almost a sine qua non for hospital success. If the statements of medical men themselves may be taken at face value, it would seem that nowhere is prejudice, envy and petty policy so rampant as among small town physicians.

PART VI. HOW SOME OF THE INFORMATION NEEDED TO SOLVE THE COMMUNITY HOSPITAL PROBLEM MAY BE SECURED

From what has been said, it would seem that adequate standards on the strength of which hospitals may be established and operated in rural communities are still largely to be created. Various steps suggest themselves by which the fundamental data that are necessary for this purpose may be provided.

1. The experience of existing community hospitals may be studied. This would include a study of the

methods used in establishment and administration, attitude of the public, patronage, and above all a careful investigation into the case history of the hospital through an extended period of time to throw light on the growth and change in the hospital needs of the locality. The International Health Board has on file a fairly complete statement (as of January, 1918) of small hospitals in operation in all parts of the United States, together with a further statement on such hospitals as have been planned, or the establishment of which is being agitated in various communities.

2. In carefully selected communities, experiments might be conducted through the construction of typical community hospitals, coupled with a close study of community health conditions and hospital needs of individual cases of sickness, as well as the numerous other factors concerning which information appears desirable.

3. Community surveys could be made to supply a large basis of statistical fact concerning the extent and character of sickness, with particular reference to its relation to the extent of hospital care needed by the sick. This information could be collected only through personal visits to the homes of the sick and careful investigation of all facts surrounding each case. Such work obviously would need to be in the hands of a competent investigator who was able to secure access to cases of sickness and to receive complete information with regard to them. It is believed that where such a survey is planned, the rural home visiting nurse would deserve close consideration as an effective enumerator. A number of important advantages at once come to mind:

1. The nurse can gather statistical data in the course of her regular duties. Being a by-product of her regular work, the survey would not be expensive. This method would also be a diplomatic way of getting information. The community will not be likely to feel that it is being made the object of "high-brow curiosity," as has so often been the case in the conduct of social investigations. The visit of the nurse will be in the spirit of a service, not of a study.

2. The nurse would also be in a position to follow each case with greater care, and by use of more time than could be devoted to it by a special enumerator whose effort would probably of necessity have to be limited to a single call. Repeated visits would tend to eliminate errors and in other ways increase the accuracy of the record.

3. Where surveys have been attempted it has been found that frequently reluctance is shown in giving information. The nurse, as a welcome attendant of the sick, would be apt to encounter open hearts and minds and complete confidence, such as would not be accorded an enumerator, no matter how tactful, who was unknown to the family approached.

4. Overshadowing in many respects the considerations already set forth is the fact that the actual hospital needs of a community can hardly be accurately determined without first ascertaining what cases of sickness may be properly cared for in the home. Information has already been presented which shows that 65 per cent. of the cases of sickness studied are cared for in homes. The work of the home-visiting nurse will serve to demonstrate what cases at present cared for in homes should be cared for in hospital, and vice versa. Nowhere does it seem to have been found wise to seek to drive a maximum number of cases of sickness into hospitals. Hospital care is always expensive because the plant is expensive and the space is comparatively limited. The home is the logical place for the care of the sick who can be cared for there. It is also the most economical, the most satisfactory, and the sort of care which, other things being equal, gives promise of quickest recovery. The work of an efficient home-visiting nurse will serve to delimit the sphere of home care, on the one hand, and of hospital care, on the other.

5. An exceedingly important by-product in the form of favorable public sentiment is also likely to result when a survey made with a view to the possible establishment of a hospital is conducted by a home-visiting nurse. It seems to be generally conceded that, as an efficient educational force, practical daily demonstrations by a tactful and helpful home-visiting nurse can hardly be excelled. Nothing teaches like demonstration. The nurse will deal with the raw material of the future hospital, and can drive home her arguments with a convincing certainty. A death that might have been avoided, invalidity due to lack of hospital facilities, tardy surgical attendance which prolongs suffering in place of speedy relief—all these things may be used to impress local sentiment deeply.

By the time a survey of this kind has been completed, it would seem that public sentiment would probably be ready to back a hospital of the type required to meet the established needs of the community.

It seems not unlikely that in many communities the diagnostic clinic and laboratory may prove a nucleus from which local hospital facilities will be developed. Such a clinic is likely to develop in physicians the spirit of cooperation, and will bring them together at a central point where, through provision of special facilities, far more accurate diagnoses can be made than are possible under ordinary circumstances. It seems but a step, even though an important one, from such a central clinic to a hospital. The hospital may then house the clinic as well as the patient who needs hospital care in accordance with the diagnosis of the clinic.

Though the hospital occupies an important place in any health program, it may be pointed out that other steps looking to health preservation may well precede it. A hospital established with public funds and maintained by the public results from organized local action. The more efficient the organization of health forces, and the more careful the planning which preceded its establishment, the more secure is the foundation of the hospital likely to be, and the more valuable its services.[11]

A hospital represents a considerable outlay of funds. Numerous important lines of health work, which as life-saving and health-improving factors may outrank hospital service, can be put under way and effectively prosecuted in a community with an expenditure far less than that required for the establishment of a community hospital.

Hospital experience seems to have shown that the full benefits of the service will not be enjoyed by a community until sentiment has ripened to an adequate appreciation of exactly what hospital service means. Through the organization of the health forces of a community, by which is meant the formal getting together of those who are appreciative of the public health movement and have come to acquire an interest in matters of personal hygiene, it will be possible to set on foot important constructive measures which are likely to accomplish distinct improvements in health conditions long before the local hospital should appear on the scene. Such movements are always worth encouraging. The personal touch thus given to work, which is likely to be constantly extended, may prove much like the snowball rolling downhill that gains in size and momentum as it courses on its way. In time—in a short time in some communities, and a longer time in others—the occasion may be ripe for the launching of the hospital project with the assurance that the institution is likely to receive the support of the community and to be utilized to its fullest extent. No aspect of the hospital movement seems more unfortunate than that of a community which has burdened itself with a hospital before the bulk of the people have become appreciative of its mission, and which as a result must struggle to get the patronage needed to maintain the institution and to enable it to render the services for which it was established.

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[11] An interesting statement by Joseph J. Weber, at the time executive secretary, and chairman of the Committee on Hospitals, State Charities Aid Association of New York, which is intended as an argument for the organization of local health forces through the establishment of county health associations prior to the establishment of general county hospitals, appeared in *The Survey*, October 16, 1915.

New and Nonofficial Remedies

The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application.

W. A. Puckner, Secretary.

DIPHTHERIA ANTITOXIN, CONCENTRATED (See N. N. R., 1919, p. 265).

The Gilliland Laboratories, Ambler, Pa.

Gilliland's Concentrated and Refined Diphtheria Antitoxin.—Prepared according to Banzhaf's method and preserved with 0.4 per cent. trikresol, contains less than 20 per cent. of solids. Marketed in ampules containing 1,000, 5,000 and 10,000 units each.

TETANUS ANTITOXIN, CONCENTRATED (See N. N. R., 1919, p. 266).

The Gilliland Laboratories, Ambler, Pa.

Gilliland's Concentrated and Refined Tetanus Antitoxin.—Marketed in ampules containing 1,500, 3,000 and 5,000 units each.

ANTIPNEUMOCOCCUS SERUM (See N. N. R., 1919, p. 271).

The Gilliland Laboratories, Ambler, Pa.

Antipneumococcus Serum, Type I.—Marketed in vials containing 100 Cc.; also in double ended vials containing 50 Cc. each, with a gravity injecting apparatus for intravenous injection.

VACCINE VIRUS (See N. N. R., 1919, p. 274).

The Gilliland Laboratories, Ambler, Pa.

Small-Pox Vaccine.—Marketed in sealed capillary tubes, in packages containing two tubes each.

OLD TUBERCULIN (See N. N. R., 1919, p. 277).

The Gilliland Laboratories, Ambler, Pa.

Original Tuberculin, "O. T."—Marketed in 3 Cc. vials.

BARBITAL (See N. N. R., 1919, p. 82).

The following dosage form has been accepted:

Barbital-Abbott Tablets, 5 grains.—Each tablet contains barbital-Abbott 5 grains.

PROCAINE (See N. N. R., 1919, p. 30).

The following dosage forms have been accepted:

Procaine Hypodermic Tablets, ¾ grain.—Each tablet contains procaine-Abbott 0.05 Gm. (¾ grain).

Procaine-Adrenalin Hypodermic Tablets.—Each tablet contains procaine-Abbott 0.02 Gm. (⅓ grain) and adrenalin 0.00002 Gm. (1/2500 grain).

ATREOL.—Ammonium Atreolate.—An aqueous solution containing as its principle constituents the ammonium salts of a mixture of organic acids containing nitrogen in the sulphonic radical which results from the action of sulphuric acid on certain petroleum distillates.

Actions and Uses.—Atreol is a mild antiseptic in solution or in ointment and may even destroy staphylococci with which it is brought in contact. It is applied locally for promoting the absorption of swellings and effusions in contusions following fractures, etc.

It is claimed to be useful in gynecologic and dermatologic practice.

Dosage.—Atreol may be employed in aqueous solution or with ointment bases, with lard, wool fat or petrolatum, or in suppositories with oil of theobroma. Preparations containing up to 50 per cent. may be used.

Manufactured by the Atlantic Refining Co., Philadelphia, Pa. U. S. patent Nos. 1,271,387 (July 2, 1918; expires 1935) and 1,073,548 (Sept. 16, 1913; expires 1930). U. S. trademark applied for.

When crude petroleum from any of the known American fields, except from those of Texas or California, is distilled to coke according to U. S. Patent No. 1,073,548 a "lubricating distillate" is obtained. When this distillate is freed from solid paraffin and from lighter oils, the residue is a form of crude lubricating oil. This is purified by treatment with sulphuric acid with production of two classes of sulphonic acids, one soluble in oil, the other insoluble in oil. The latter class of acids, called crude atreolic acid, is isolated according to U. S. Patent No. 1,271,387. This mixture of acids is purified and converted to ammonium salts. The solution of these ammonium salts in water, to which is added some glycerin, constitutes atreol. The mixture of acids which constitutes the basis of atreol is stated to have the following composition: carbon, 75.25; hydrogen, 7.63; sulphur, 6.20; nitrogen, 1.50; oxygen (by difference), 9.42.

Atreol is a black, syrupy liquid with a bitter, though not nauseating taste. It is completely soluble in water, almost entirely soluble in ethyl alcohol, but insoluble in chloroform. It is miscible with glycerin, lard, wool fat, and petrolatum in all proportions.

The aqueous solution of atreol (1:10) has a faintly acid reaction to blue litmus. The aqueous solution (1:10) yields a greenish black precipitate upon the addition of hydrochloric acid. This precipitate becomes tar-like on heating, and dissolves in water after the removal of any excess of hydrochloric acid and may be precipitated upon further addition of hydrochloric acid. Other acids and salts, e. g., sulphuric acid or aluminum sulphate, also precipitate a resin-like precipitate from the aqueous solution of atreol.

Boil an aqueous solution of atreol (1:10) with sodium hydroxide solution. Ammonia is evolved.

Incinerate 1 Gm. of atreol. Not more than 1 per cent. of residue remains.

Atreol loses not more than 38 per cent. of its weight when dried at 100 C.

Introduce 5 to 8 Gm. (accurately weighed) of atreol into a flask, add 100 Cc. of water and an excess of potassium hydroxide solution. Distill the mixture until no more ammonia passes over, collect the distillate in 20 Cc. of normal sulphuric acid volumetric solution, add two drops of methyl orange test solution and titrate the excess of acid with half-normal potassium hydroxide volumetric solution; the amount of normal sulphuric acid volumetric solution consumed corresponds to from 1.3 to 1.6 per cent. of ammonia (NH_3).

Place 5 to 6 Gm. (accurately weighed) of atreol into a beaker, add 50 Cc. of water and 10 Cc. of a 10 per cent. solution of albumin followed by 5 portions of 5 Cc. each of diluted hydrochloric acid, shaking after each addition. Make up the mixture to a volume of about 350 Cc. and filter through a dry filter. Heat to boiling, add 10 Cc. of a 10 per cent. barium chloride test solution and allow the mixture to stand. Filter off the precipitate of barium sulphate, wash, heat and weigh. The weight of barium sulphate obtained corresponds to less than 0.5 per cent. of ammonium sulphate.

Introduce about 1 Gm. (accurately weighed) of atreol into a Kjeldahl flask, dilute with 30 Cc. of water, add 5 Gm. of potassium chlorate followed by 30 Cc. of nitric acid and evaporate the mixture to about 5 Cc., on a bath of boiling water; add 25 Cc. of hydrochloric acid and evaporate to 5 Cc.; again add 25 Cc. of hydrochloric acid and evaporate to 5 Cc. Then add 100 Cc. of water, heat to boiling and add 10 Cc. of barium chloride test solution; allow the precipitate of barium sulphate to settle; filter, wash, heat and weigh. The weight of the barium sulphate corresponds to from 3.75 to 4.75 per cent. of total sulphur. Calculate the ammonia in the ammonium sulphate, as previously determined in atreol, and subtract the result from total ammonia as previously determined. The remainder represents the ammonia in the organic sulphonic acid group. Multiply this value by 1.88. The result represents the sulphur in the sulphonic group, or the "sulphonic sulphur" and amounts to at least 2.4 per cent. Calculate the sulphur contained in the ammonium sulphate as previously determined in atreol and subtract the result from "total sulphur" as previously determined; from this, subtract the "sulphonic" sulphur. The remainder represents the sulphur present as "organic" ("sulphid") sulphur and amounts to from 1.3 to 2.0 per cent.

Place about 5 to 8 Gm. (accurately weighed) of atreol into a 300 Cc. Kjeldahl flask and repeatedly evaporate to dryness with an excess of potassium hydroxide test solution to remove all combined ammonia. Determine the nitrogen in the residue by the Kjeldahl method. The amount of nitrogen in this residue corresponds to at least 0.75 per cent.

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SATURDAY, MAY 17, 1919

THE THEORIES OF MILK SECRETION

The progress of physiologic chemistry after the middle of the last century contributed indisputable proof of the untenability of the theory of milk secretion which prevailed prior to 1850. At that time it was assumed that the function of the mammary gland, as well as that of other secretory structures, involved essentially a filtering out from the blood of those substances that constitute the respective secretions. For certain components, such as the inorganic salts and water, an explanation of this sort seemed plausible. But as milk contains lactose, a sugar that is not present in the circulating fluid which perfuses the mammary gland, it became evident that the old theory of filtration must be given up.

To account for the appearance of specific products like lactose and casein in milk, when they are found nowhere else in the body, other secretory hypotheses were formulated. According to the oldest of these, the cells of the gland break loose bodily and disintegrate in the alveoli to form the milk solids. A trenchant criticism of this explanation was offered many years ago by the Breslau physiologist Heidenhain.[1] He pointed out that the actual disintegration for the milk produced by some cows in one day would require the replacing of all cells in the udder at least five times a day, a replacement of cells unprecedented in our knowledge of cell division.

Greater plausibility is attached to the theory that associates the activity of the mammary gland with a growth and subsequent detachment of the parts of the cells nearest the alveoli. Loaded with products partly in the form of granules, they are asserted to break away from the basal portions and then disintegrate to produce the milk solids. This conception of the process of the formation of milk has derived its support largely from histologic examinations of the appearance of the gland cells and structures in various stages of the lactation process.

Finally, there is a theory of milk formation which assumes that the cells secrete the materials of which milk is composed without unusual cell destruction. In other words, mammary secretion is analogous to the process for which structures like the salivary or pancreatic glands are responsible.

In an elaborate statistical study of the variation of different components of the milk, notably the fat and the solids not fat, in relation to age in a single breed of cows, Gowen[2] of the Maine Agricultural Experiment Station has disclosed deviations which cannot be reconciled with the cell disintegration hypotheses. Whereas the fat concentration of the milk is maintained throughout life, the proportion of solids not fat, which include sugar, proteins and salts, declines somewhat. Similarly the butter fat constituent increases in the evening milk, whereas the other solids do not share in this proportionate increment. This change of the ratio of fat to solids not fat can scarcely be reconciled with the cell destruction hypotheses; for it is not likely that the cell constitution should change morning and evening in the gland. Such inconsistencies, therefore, support the secretory hypothesis for milk production. Even the theory of a common antecedent for the milk solids can no longer be maintained. As Gowen concludes, the correlation of fat and of solids not fat with amount of milk and age precludes that possibility; for if such a common origin occurred, the fat and the solids not fat would necessarily be correlated to these other variables by comparable amounts. The milk components are not correlated equally with either milk quantity or with age; consequently the hypothesis of a common origin is not tenable. Surprisingly little is known about the process in the case of woman. There is no reason to assume, however, that what occurs in the lactation of cattle differs in its fundamental physiologic principles from the process of milk secretion in the human mammary glands.

NONSPECIFIC PROTEIN THERAPY

The treatment by nonspecific methods in a series of cases of influenzal pneumonia has been the subject of two recent papers.[3] These methods are a development of the work of Ichikawa, Kraus, Lüdke, Jobling and Petersen, and others on the treatment of typhoid fever and of Miller and Lusk's work on arthritis. In the original work in this field it was recognized that there were certain inherent dangers in the method and that wide application would be permissible only with the greatest caution and under careful control.

When vaccines and other toxic protein substances are injected intravenously a train of reactions takes place that includes: (*a*) a primary leukopenia, followed by a leukocytosis; (*b*) a primary lessening of the coagulability of the blood, followed after some interval by a reduction of the coagulation time; (*c*) a pronounced lymphagogue effect, the flow of lymph from the thoracic duct being increased three-fold; (*d*) a hyperistalsis of the intestinal tract, and (*e*) a marked splanchnic engorgement with a resulting lowering of the systemic blood pressure. The alteration of the coagulability of the blood, together with the vascular engorgement of the splanchnic area and the coincident increase in motility of the intestinal tract that follow the therapeutic injection, all tend to increase the possibility of intestinal hemorrhage. Protein therapy is therefore not a safe procedure in this particular disease. That we are able to terminate a certain number of cases of typhoid fever by crisis by means of such injections is of very great interest from a theoretical point of view.

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[1] Heidenhain, R.: Die Milchabsonderung, Hermann, Handbuch der Physiologie, **5**: 380, 1883.

[2] Gowen, J. W.: Variations and Mode of Secretion of Milk Solids, J. Agric. Res. **16**: 79, 1919.

[3] Roberts, Dudley, and Cary, Edw. G.: Bacterial Protein Injections in Influenzal Pneumonia, J. A. M. A. **72**: 922 (March 29) 1919. Cowie, D. M., and Beaven, P. W.: Nonspecific Protein Therapy in Influenzal Pneumonia, J. A. M. A. **72**: 1117 (April 19) 1919.

In the treatment of arthritis the results seem much more satisfactory. The work of Miller and Lusk[4] has been confirmed by a number of observers, among them Culver, Cecil, Snyder, Cowie and Calhoun, and there seems little doubt that we may be able to give prompt relief and even permanent freedom from symptoms in a considerable percentage of cases of acute and subacute arthritis, especially those classed as of rheumatic origin—and this with practically no risk to the patient.

As with other new therapeutic measures, there is still some uncertainty as to the proper dosage, which is a matter of considerable importance, in order to arrive at a just estimate of the relative advantage or danger in the treatment. Typhoid vaccines have been extensively used because they are readily procured and give a prompt and sharp reaction. However, they have the disadvantage of inexactitude in the bacterial count, as well as being of varying degrees of toxicity, this latter factor depending not only on the use of different strains of bacteria in their preparation but on the age of the vaccine. Snyder,[5] as well as other workers, is of the opinion that the primary dose should be small—from five to ten million organisms—and that the dose of typhoid bacilli injected should never exceed two hundred and fifty million. While a sharp reaction on the part of the patient is apparently a desideratum, a sufficient response can usually be elicited with a relatively small dose. There is no object in subjecting the patient to the risk of the profound depression that follows occasionally in the wake of large doses. Indeed, the only serious results so far ascribed as due to this form of therapy have followed very large doses or the use of relatively large doses in moribund patients; or such unreasonable procedures as the intravenous injection of milk. It is true that milk injections were recommended by some of the German investigators, but they were always used intramuscularly.

In the treatment of pneumonia, Roberts and Cary[1] have employed a vaccine made up of 100 million of each of the following organisms per cubic centimeter: influenza bacilli, pneumococci, staphylococci and streptococci. Of this vaccine they injected intravenously first 0.5 c.c., later 1 c.c. In the series of 200 patients so treated there was no evidence of injury to the patients in any way. The mortality in this series was 9.5 per cent.; in a series of eighty-six patients not treated with vaccine the mortality was 31.2 per cent. In the untreated series 20 per cent. recovered by crisis; in the treated, 36 per cent. so recovered. Before any reliance is placed on such statistics they should be analyzed and compared carefully according to age periods as the death rate may vary at different ages. Cowie and Beaven[1] used typhoid vaccine in the treatment of their patients, and they consider the vaccine shock as indicated only in the early stages of pneumonia.

Before applying the treatment to such diseases as pneumonia it would seem that prudence would demand a thorough familiarity with the range of the reaction and the degree of toxicity of the preparation it is intended to use by first employing it in some arthritic cases. In pneumonia we must ever keep before us the vital factor of cardiac impairment and certainly we must not undertake any measure that may depress the function of the heart. In arthritis this danger is largely a negligible one and, with proper precaution, nonspecific therapy is not only without risk but indeed frequently followed by gratifying clinical improvement. Only in the light of experience gained in the manner indicated would it seem permissible for us to attempt to extend this form of therapy to more acute infections.

MALARIA CONTROL IN THE FUTURE

The discovery of the cause and mode of transmission of malaria has paved the way for eradication of the disease. A few years ago the task might have seemed almost hopeless in its magnitude and presumable cost. The experience of Gorgas and his co-workers in the Panama Canal Zone has, however, changed the prospect. It has given a new inspiration to the effort to overcome a menace to personal happiness and community spirit, and to eliminate a source of deterioration of physical and mental vigor. Few organizations or governments could aspire to cope with the malaria problem as efficiently and successfully as is likely to be done by the International Health Board of the Rockefeller Foundation, which has begun a world-wide campaign against hookworm disease.[1] With a view to stimulating more energetic measures against malaria, the board has also interested itself in the problem of malaria control. It is a sign of wisdom that before attempting to put into operation any finished antimalaria program, this unique organization of specialists has undertaken to test working methods and to evaluate, separately, a number of control measures.

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[4] Miller, J. L., and Lusk, F. B.: The Treatment of Arthritis by the Intravenous Injection of Foreign Protein, J. A. M. A. **66**: 1756 (June 3) 1916; The Use of Foreign Protein in the Treatment of Arthritis, ibid. **67**: 2010 (Dec. 30) 1916.

[5] Snyder, R. G.: A Clinical Report of Nonspecific Protein Therapy in the Treatment of Arthritis, Arch. Int. Med. **22**: 224 (Aug.) 1918.

[1] Report of International Health Board, Social Medicine, Medical Economics and Miscellany, J. A. M. A. **72**: 751 (March 8) 1919.

According to the latest report of the Rockefeller Foundation, all of the four measures tested in a preliminary way have exhibited some degree of success. In cooperation with the Mississippi State Department of Health, under the scientific direction of Dr. C. C. Bass of the Tulane University of Louisiana School of Medicine, an experiment was undertaken in 1916 to test the feasibility of controlling malaria in a community by sterilizing the human carriers. A program of this character might be feasible under conditions in which the extermination of mosquitoes is not regarded as practicable. The results of efforts involving more than 25,000 persons does not yet permit a final conclusion; but the indication, according to the report, is that the malaria rate in a given community can be reduced by direct attack on the malaria plasmodia in the blood of the human host.

An effort to control malaria by screening has been made with characteristic thoroughness in a community in Arkansas. A study of the parasite index among the population showed a reduction of 70 per cent. in the prevalence of infection within a year. From a practical standpoint it is helpful to learn that the average cost of screening in this community was less than $15 a house. The per capita cost was estimated at $1.75, thus giving a forceful justification to the slogan: "A yard of screen in the window is better than a yard of crape on the door." In another rural community, where prophylactic quinin was tried as the sole measure of control and was administered to all persons in the community in doses of 5 grains, morning and evening, making 10 grains a day for two successive days each week, there was likewise noteworthy success. A reduction of 60 per cent. in the parasite index was attained in a few months, the per capita cost of the work, omitting the overhead cost, being 57 cents.

Obviously the control of malaria by antimosquito measures should ultimately prove to be the most beneficent mode of attack. Unfortunately the expense involved is not infrequently greater than the communities concerned can be induced to bear. However, the experiments at Crossett and Hamburg, Ark., where the elimination of breeding places of mosquitoes by drainage and other modern antimosquito measures was undertaken, leave no doubt regarding the efficacy of this type of prophylactic work also. The demonstration of the possibility of diminishing the incidence of malaria by more than one method in a given community is a contribution of unusual value to modern preventive medicine. There is promise that where, for example, the cost of mosquito extermination is temporarily prohibitive, other, perhaps less expensive, methods of malaria control can be instituted.

RECENT OBSERVATIONS ON INFLUENZA IN GERMANY

A recent issue of the *Medical Supplement*[1] published monthly by the British War Office since January, 1918, covers the more recent articles on influenza which have appeared in Germany. It may be of interest to give a brief digest of these articles even at second hand. The influenza bacillus has not been found any more frequently than in this country, which confirms the general impression that it is not the primary cause of the disease. Thus Leichentritt[2] found it in the sputum in from 51 to 60 per cent. of influenza cases and in sputum examined for tubercle bacilli primarily, in 24 per cent. Pfeiffer,[3] the original discoverer of this bacillus, found it in the sputum in 51 per cent. of influenza cases examined. Fränkel,[4] Löwenfeld[5] and others appear to have found it in influenza sputum in a considerably larger percentage. After death the bacillus was found scattered throughout the body in eight of eleven cases studied by Fränkel, and Löwenfeld is said to have demonstrated it postmortem in the bronchial pus in 80 per cent. of cases. Pfeiffer found the bacillus also in the internal organs in some cases. Others, like Graetz,[6] were not able to find the bacillus either in the sputum during life or in the bronchi and lungs after death, except just occasionally. It should be remembered that in no case is there any mention of cultures having been made of material obtained from the throat or nasopharynx by means of swabs and that the results just mentioned refer, so far as concerns examinations during life, to cultures or smears of the sputum.

It would be desirable if more attention were given to the material secured by means of swabs because the results may give a better idea of the bacterial flora in the throat than study of the sputum.

Of all the authors whose work is considered, not a single one ventures to claim that the influenza bacillus is the cause of the disease.

Friedberger and Konitzer,[7] after a careful review of all recent German work, conclude that the epidemic was identical with that of 1890-1891; that the cause of influenza remains unknown; that as to the influenza bacillus, some German investigators have found it in a large percentage of cases, others hardly at all, but that since December, 1918, it seems to have been found more frequently while "diplostreptococci" (not described in detail), which were very frequent and were often found even in pure cultures, have become less frequent since last December. Of organisms other than the influenza bacillus, pneumococci, streptococci, and "diplostreptococci" are mentioned, but it does not appear that any of them have been studied closely. Friedberger and Konitzer made experiments on human beings by spraying, into the throat and nose, filtrates of secretions from the different parts of the respiratory tract in influenza but without any positive result. According to Reuter,[8] the most pronounced changes in acute cases of influenza were in the lower part of the larynx, in the trachea and in the main bronchi, the lining of which was red, swollen and covered with a yellow, gray deposit, underneath which were small hemorrhages. We need further careful observations before we can conclude that such lesions are the primary lesions of influenza, although it is true that the clinical symptoms indicate that such may be the case. He describes the lungs in influenzal bronchopneumonia as simulating the lungs of a hemorrhagic pulmonary edema. In some cases the peribronchial lymph nodes were so swollen that possibly bradycardia might have been caused by pressure on the vagus. This author speaks of the throat as being only slightly red and swollen, and the tonsils as unaffected. From the information furnished by this review it seems safe to conclude that up to the present time, the bacteriologic, anatomic and experimental work on influenza during the recent epidemic in Germany has yielded results of the same general nature as those obtained in this country, and that the primary causative agent of influenza still remains unknown.

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[1] Medical Supplement to the Review of the Foreign Press. issued by the General Staff, War Office **2**: 164, 180, 1919.

[2] Leichentritt, B.: *Deutsch. med.* Wchnschr. **44**: 1919, 1918.

[3] Pfeiffer, R.: Med. Klin. **15**: 80, 1919.

[4] Fränkel, E.: Deutsch. med. Wchnschr. **44**: 1422, 1918.

[5] Löwenfeld, D.: Wien. klin. Wchnschr. **31**: 1274, 1918.

[6] Graetz: Berl. klin. Wchnschr. **56**: 46, 1919.

[7] Friedberger u. Konitzer: Med. Klin. **15**: 108, 1919.

THE LENGTH OF LIFE OF RED BLOOD CORPUSCLES

The question as to the usual length of life of the red blood corpuscles has come to have more than mere academic interest. Erythrocytes form an important part of every portion of blood that is transfused from one person to another. Ashby[9] has clearly pointed out that whether transfused blood corpuscles live and function for any considerable length of time or whether the beneficial results that have been observed to follow transfusion, outside the purely mechanical part of increasing the bulk of the depleted blood, are due to a stimulating effect on the hematopoietic function by the product of the broken down corpuscles is still an open question.

When red corpuscles disintegrate, they liberate the pigmentary portion of their constituent hemoglobin. This can be converted into bile by the liver and also excreted as fecal pigments. The fact that these are constantly leaving the body has furnished a reason for the belief that red cells are as constantly being destroyed. Since the number of red cells is ordinarily not decreased, the loss of hemoglobin must be made good by a regeneration of hemoglobin and new corpuscles to contain it. Formerly attempts were made to estimate the extent of destruction of the corpuscles from determinations of the daily excretion of bile pigments. That this plan is untrustworthy has been demonstrated by Hooper and Whipple,[10] according to whom the bile pigments arise, in part at least, from products which the liver has manufactured in excess of its needs for the elaboration of hemoglobin and which, not being needed, are excreted. A still different method of ascertaining how long a corpuscle continues to exist in the circulation consisted in attempting to determine the length of time during which foreign and easily recognized red corpuscles, such as the nucleated erythrocytes of birds, can be recognized in the blood after their injection into the circulation of a mammal. The fallacy of this procedure appeared as soon as modern studies in immunology demonstrated the exceptional instability of foreign cells in the blood serum.

Working at the Mayo Foundation, Ashby seems to have hit on a more promising method. This is based on the observation that it is possible in mixtures of corpuscles of different groups to separate the corpuscles practically quantitatively by treating with a serum that agglutinates the corpuscles of one kind, leaving the others unagglutinated. After a recipient has been transfused with blood of a group other than his own, specimens of his blood treated with a serum that will agglutinate his own corpuscles but not the transfused corpuscles show unagglutinated corpuscles in large numbers. These unagglutinated corpuscles which appear in the recipient's blood after such a transfusion are the transfused corpuscles, and their count is a quantitative indicator of the amount of transfused blood still present in the recipient's circulation.

From counts made on this basis on the blood of persons transfused in the Mayo Clinic, Ashby concludes that the life of the transfused corpuscle extends over thirty days or more. This is a longer lease than was allotted by the earlier estimates obtained by means of the now admittedly invalid assumptions. The conclusions have a practical bearing on transfusion practice. If there is ordinarily no immediate breakdown of the donated corpuscles, the suggestion to push the transfusions until a normal blood cell count is obtained deserves serious consideration. In the absence of disintegration products it becomes more likely that the stimulation of the bone marrow asserted to follow transfusion is the result of improved metabolic condition of bone marrow cells brought about by the increased content of circulating red cells rather than of some stimulatory effect of cellular débris. Or, as Ashby finally concludes, the beneficial results of transfusion may not be due primarily to a stimulating effect on the bone marrow, but more probably to the functioning of the red blood corpuscles.

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[8] Reuter: Wien. med. Wchnschr. 68: 2161, 1918.

[9] Ashby, Winifred: The Determination of the Length of Life of Transfused Blood Corpuscles in Man, J. Exper. M. 29: 267, 1919.

[10] The Life of the Red Blood Corpuscles and "Bile Circulation," editorial, J. A. M. A. 68: 1819 (June 16) 1917.

Current Comment

CONTACT INFECTION VERSUS MILK-BORNE INFECTION IN STREPTOCOCCUS SORE THROAT

An interesting report on a hospital epidemic of streptococcus sore throat is that of Keegan which appears in this issue of the JOURNAL.[1] The evidence submitted by the writer indicates quite definitely that the epidemic in question was spread largely by contact in the hospital wards. The author emphasizes strongly the contact nature of the epidemic. Indeed, he goes so far as to express doubt regarding the nature of certain other epidemics of this disease that have been attributed to milk-borne infection. It seems hardly justifiable to regard epidemiologic evidence of this character as necessarily contradictory. If one epidemic is traced to contact, that need not hinder an investigator from accepting evidence that other epidemics are due to other modes of transmission. There is good evidence that diphtheria can be caused by contaminated milk, but such a statement by no means excludes the possibility or probability of diphtheria contact infection. In point of fact the contact epidemic of streptococcus sore throat reported by Keegan is not the first or the only evidence of cases of this sort on record. An extensive contact outbreak of streptococcus sore throat in the state of New York was reported several years ago by Winslow and Hubbard,[2] and recent editions of standard textbooks contain the statement that the disease may be spread both by milk and through contact. There is no escape from the conclusion that the evidence in favor of milk-borne transmission of this disease is quite convincing, not only in some of the instances cited by Keegan but also in a number of other well-studied outbreaks not mentioned in his article. The epidemic at Galesville, Wisconsin, described by Henika and Thompson,[3] gives a particularly clear-cut picture of a milk-borne epidemic. On the whole, although the report of Dr. Keegan's experience adds to our knowledge of the mode of transmission of streptococcus sore throat, his criticism of the epidemiologic reports of others does not seem particularly cogent. This evidence can hardly overthrow well-established facts such as the occurrence of genuine milk-borne epidemics of streptococcus sore throat.

AN AGE OF QUACKERY

A correspondent having called our attention to a freakish article appearing in a magazine of the "health fad" or "physical culture" type, it became necessary to buy a copy of this magazine. So much by way of apology. In clipping the various advertisements from this magazine for the Propaganda files, we discovered in the fifty-seven varieties of fakes, medical, quasi-medical, and otherwise, the dominant note of the magazine's advertisers: Short Cuts! Short cuts to life, liberty and the pursuit of happiness. Short cuts to health, of course, predominate. One learns that he may cure himself of almost anything from soft corns to cirrhosis of the liver by means of the various "internal baths" so plausibly presented by numerous gentlemen who wish to relieve humanity—of surplus cash. You can be made "a 100 per cent. man" by at least six different methods of physical training, each of which is unique and entirely different from its five worthless competitors. Are your eyes weak? There is a short cut cure for them! Are you deaf? There is a short cut to perfect hearing! Are you ruptured? There is a short cut hernia cure. Do you crave large busts? Presto change, you may have them. Every faddist shrewd enough to keep out of the insane asylum seems to be exploiting his particular panacea. One thing must be said for the advertising department of this magazine: it is at least consistent. It does not confine the short cut methods to the relief and cure of human ailments. Any one with a short cut—and the wherewithal to pay for exploiting it—is welcome. One is able, so the advertisers assure us, to "learn shorthand in 7 days;" to "increase your will power in one hour;" to "gain a thorough knowledge of law in your spare time;" to learn in one evening "the secret of being a convincing talker;" to learn to play the piano "in quarter the usual time at quarter the usual cost, and all by correspondence." Verily, we live in an age of quackery. And all the quacks are not in the medical profession, nor are all the nostrums in the "patent medicine" field. Economists tell us that never in the history of the country has there been so much money per capita as today. As a result, there are abroad in the land gentlemen who, figuratively speaking, wish you to invest. After looking through this magazine, it became obvious that the get-rich-quick fraternity does not confine its talents to selling oil stocks, real estate, or "mountain canaries."

THE INCIDENCE OF DISEASE CONTRASTED FOR WHITE AND COLORED TROOPS

Students of eugenics are wont to point out that "certain races of men, without consciousness of their action, have varied in the character of their choices (sex selection) in such a way as to bring about varied conditions in their races, with respect to resistance to disease, to mental capacity, and to moral quality."[1] Of these three factors, the resistance to disease is susceptible of most accurate estimation because it can be considered on the basis of statistical information regarding the morbidity rate in the case of a wide range of disorders. A peculiarly valuable instance is afforded by the comparison of white men and negroes in the United States Army. The numbers are sufficiently large to give some semblance of validity to the deductions which they permit. The white and colored troops live under equally good sanitary conditions and are examined with equal diagnostic skill. A study of the

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[1] Keegan, J. J.: A Hospital Epidemic of Streptococcus Sore Throat with Surgical Complications, this issue, p. 1434.

[2] Winslow, C. E. A., and Hubbard, L. W.: Month. Bull., New York State Department of Health, September, 1915.

[3] Henika, G. W., and Thompson, I. F.: Septic Sore Throat, J. A. M. A. **68:** 1307 (May 5) 1917.

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[1] Fisher, Irving, and Fisk, E. L.: How to Live, New York, 1915, p. 323.

sort indicated has recently been reported by Lieutenant-Colonel Love and Major Davenport,[2] who have undertaken an analysis of more than half a million admissions to sick report in our army, including more than 15,000 for the colored troops. For many maladies the morbidity rate is the same in the two races. The army officers have, however, ascertained from the statistics that the colored troops are relatively less resistant to diseases of the lungs and pleura as well as to certain general diseases, like tuberculosis and smallpox; they are also much more frequently infected with venereal diseases, and suffer widespread complications of these diseases. Love and Davenport point out, on the other hand, that in general the skin, not only on the surface of the body but also that which is infolded to form the lining of the mouth and nasopharynx, is much more resistant to micro-organisms in negroes than in white men. The white skin seems to be relatively a degenerate skin in this respect. Furthermore, the nervous systems of the uninfected negroes show fewer cases of "instability" than those of white men. Thus there is far less neurasthenia, there are fewer instances of psychopathic states, and there is only half as much alcoholism in colored as in white troops. Nutritional disorders, such as diabetes, urinary calculi, and inflammations of the gallbladder, are also less common among the negroes. As Love and Davenport describe the uninfected negro, "he seems to have more stable nerves, has better eyes, and metabolizes better. Thus, in many respects the uninfected colored troops show themselves to be constitutionally better physiological machines than the white men."

THE MATERIALITY OF GERMS AND AUTOMOBILES

A recent issue of a Newark, N. J., paper reports the death of a 9 year old girl, the daughter of "Christian Scientists," who succumbed to diphtheria under "Christian Science" treatment. According to this report, the parents of the child asked her when she became ill whether she desired a doctor or wished to have "Christian Science" treatment, "and the little girl chose the latter because it was her belief." Presumably the answer to this tragedy on the part of the "Christian Scientists" generally, will be that children also die of diphtheria under medical treatment. This is the stock argument whenever a member of this cult "passes on." The point is not well taken. If this same little girl had been pinned under an overturned automobile, even her parents would not have urged their particular form of treatment to the exclusion of first removing the car from the child. It is true that prying up the car and taking the girl from under might not have saved her life; but in the present state of our knowledge, this would be the first and obvious thing to do. It is equally true that giving the child antitoxin might not have saved her life, but this, too, in the present state of our knowledge, should have been the first and obvious thing to do. Matter may be merely an error of mortal mind, but when it is ponderous enough, even "Christian Scientists" are forced to take cognizance of it, and to use material methods in dealing with it. Although the followers of Mrs. Eddy may not believe it, the Klebs-Loeffler bacillus is a material object, and while not so obvious as a brick, it is, in its own peculiar field, just as pregnant with danger to that other error of mortal mind we call the material body.

Association News

THE VICTORY MEETING

Subcommittee on Hotels of the Local Committee on Arrangements Assures Ample Hotel Accommodations

The chairman of the subcommittee on hotels for the Atlantic City session reports that at the present time the St. Charles, Haddon Hall, Chalfonte, Traymore, Brighton, Marlborough-Blenheim, Dennis, Shelburne and Chelsea are booked to their capacity for the week of the Victory Meeting—the annual session of the American Medical Association. The managements of these hotels have informed the committee that they will make reservations at a later date provided they are in position to do so. The other beach front hotels (The Journal, May 10, 1919, page 1410) are still in position to make reservations.

This announcement does not mean that there will be difficulty in caring for all who attend the Victory Meeting. Atlantic City is a city of hotels, and the large number of excellently equipped hotels on the side avenues will provide ample accommodations. All communications concerning hotels should be addressed to the Chairman of the Hotel Committee, Dr. David B. Allman, 1801 Pacific Avenue, Atlantic City, N. J.

Medical Mobilization and the War

Personnel of the Medical Department

For the week ending May 9, there were 17,560 officers in the Medical Corps, a decrease of 553 from the previous week. The Medical Reserve Corps contained 1,870 officers. The total number of medical officers discharged since the beginning of the war is 15,996.

Army Transfers Hospitals to Public Health Service

The hospitals at Camp Beauregard, La.; Camp Cody, N. M.; Camp Fremont, Calif.; Camp Hancock, Ga.; Camp J. E. Johnston, Fla.; Camp Logan, Tex.; Camp Sevier, S. C.; Camp Sheridan, Ala.; Dansville (N. Y.) General Hospital 13, and Nitrate Plant, Perryville, Md., with their equipment, buildings and land have been transferred by the War Department to the Treasury Department for the use of the Public Health Service in accordance with Act 326 of March 3.

Awards and Decorations

John S. Blackmar, Capt., M. C., U. S. Army, Norwich, Conn., on duty with the 372d Infantry, was awarded the Croix de Guerre.

> "He distinguished himself especially during the period of September 27 to October 6, 1918, when he showed the greatest zeal in the accomplishment of his duty, working day and night, under violent bombardment, and took care of over 400 wounded, many of whom were in a condition requiring the most difficult operations."

William C. Watkins, Major, M. C., U. S. Army, Oconto, Wis., awarded the Croix de Guerre, April 25.

Frank H. McGregor, Lieut., M. C., U. S. Army, Mangum, Okla., has been given the military war cross by King George V of England.

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[2] Love, A. C., and Davenport, C. B.: A Comparison of White and Colored Troops in Respect to Incidence of Disease, Proc. Nat. Acad. Sc. 5: 58, 1919.

Isaiah Sicotte, Capt., M. C., U. S. Army, National Mine, Mich., has been awarded the Croix de Guerre.

"On the evening of 1st of November, 1918, near Mullen, Belgium, during a terrific enemy artillery bombardment, Lieutenant I. Sicotte, Medical Department 147th Infantry, fearlessly volunteered in the digging out and saving of seventeen men who had been buried in a farm house which was struck during this bombardment. The artillery action was such that the use of any number of men for this duty was absolutely impossible. By his wonderful service and devotion Lieutenant Sicotte dug these men out of the ruins and later rendered exceptional medical service.

Slightly Wounded

In a deferred report published in the *U. S. Bulletin* of May 1, it is reported that Marshall A. Welbourn, Capt., M. C., U. S. Army, Union City, Ind., has been slightly wounded.

HONORABLE DISCHARGES, MEDICAL CORPS, U. S. ARMY

Note.—In the following list, L. signifies lieutenant; C., captain; M., major; L. C., lieutenant-colonel; Col., colonel, and B. G., brigadier-general.

ALABAMA

Anniston—Whiteside, J. M. (C.)
Bessemer—Blue, J. H. (C.)
Birmingham—Brown, E. T. (L.)
Magruder, T. V. (C.)
Perdue Hill—Gailard, S. S. (L.)
Talladega—Jones, E. H. (C.)

ARIZONA

Phoenix—Thomas, R. E. (C.)
Prescott—Yount, C. E. (L. C.)

ARKANSAS

Dumas—Isom, A. (C.)
Hot Springs—Smith, W. K. (C.)
Little Rock—Henry, H. B. (L.)
Mumey, N. (L.)
Relfs Bluffs—Wilson, J. S. (L.)

CALIFORNIA

Fresno—Staniford, K. J. (M.)
Long Beach—Hill, W. B. (L.)
Los Angeles—Granger, A. S. (C.)
Morrison, W. A. (M.)
Scholz, A. M. (L.)
Oakland—Rea, T. (C.)
Sacramento—Snyder, J. R. (L.)
San Francisco — Gibbons, M. R. (M.)
Kilgore, E. S. (L. C.)
McChesney, G. J. (M.)
South Pasadena — Sherry, L. B. (C.)
Stockton—Powell, D. R. (L.)
Woodland—Joyce, W. A. (L.)

COLORADO

Colorado Springs—Knowles, T. R. (L.)
Denver—Hillkowitz, P. (C.)
Paine, R. A. (L.)
Greeley—Woodcock, B. (C.)

CONNECTICUT

Middletown—Harvey, C. C. (C.)
Naugatuck—Bull, D. C. (C.)
Torrington—Wadhams, R. P. (L. C.)

DISTRICT OF COLUMBIA

Washington—Rosenberg, L. C. (L.)
Zinkhan A. M. (C.)

FLORIDA

Fort White—Whitlock, W. E. (C.)
Gainesville—Graham, A. (C.)
Rosborough, W. F. (L.)
McDavid—Busey, T. J. (L.)
Reddick—Ferguson, R. D. (L.)

GEORGIA

Atlanta—Cowan, Z. S. (M.)
Carrollton—Brock, S. (M.)
Columbus—Odom, J. D. (L.)
Dawson—Lamar, L. (L.)
Dublin—Hodges, C. A. (C.)
Morgan—Hendry, J. H. (L.)
Savannah—Dancy, W. R. (C.)
West Point—DeLamar, J. D. (L.)

IDAHO

Boise—Maxey, E. E. (M.)
Payette—Crouch, J. E. (C.)
Preston—Bland C. (M.)

ILLINOIS

Alto Pass—Hale, J. A. (C.)
Blue Mound—Montgomery, C. L. (C.)
Chicago—Chaffin, C. P. (C.)
Donnelly, O. A. R. (C.)
Frost, J. G. (C.)
George, R. H. (C.)
Hurlbut, S. R. (C.)
Lovewell, C. H. (M.)
McCarthy, R. R. (C.)
Mosher, G. W. (C.)
Paskind, J. (L.)
Read, W. R. (L.)
Wood, F. M. (C.)
Decatur—Morris, R. L. (M.)
Smith, F. E. (L.)
East Moline—Neil, T. F. (L. C.)
Martinton—Herdien, E. F. (C.)
Melrose Park—Shockey, G. C. (C.)
Peoria—Levitin, E. Z. (C.)
Sullivan—Davidson, W. P. (L.)

INDIANA

Bicknell—Reese, F. L. (C.)
East Haven—Green, L. M. (C.)
Evansville—Wier, J. E. (L.)
Geetingsville—Robison, J. E. (C.)
Indianapolis—George, W. E. (C.)
Sweet, R. L. (L.)
Linnsburg—Riley, F. H. (L.)
Mace—Williams, H. B. (M.)
Terre Haute—Hauck, J. H. (L.)
Warren—Black, C. S. (L.)

IOWA

Council Bluffs — Bellinger, F. E. (M.)
Moth, R. S. (C.)
Perry—McPherrin, H. I. (C.)
Webster City — Crumpton, R. C. (C.)

KANSAS

Clay Center—Morgan, E. C. (C.)
Grenola—Mason, B. B. (L.)
McPherson—Engberg, A. (C.)
Mound Valley — Bennett, R. M. (C.)
Neodesha—Williams, A. P. (L.)
Shawnee—Quiring, W. O. (L.)
Topeka—Hensley, C. M. (C.)
Wellington—Zink, C. M. (L.)
Wichita—Burton, W. G. G. (L.)
Doherty, W. T. (L.)

KENTUCKY

Bowling Green—Buford, C. C. (L.)
Central City—Foley, F. K. (C.)
Lancaster—Gilbert, J. S. (L.)
Lexington—Barrow, D. (L. C.)
McClymonds, J. T. (L. C.)
McGinnis, J. S. (L.)
Scott, J. W. (C.)
Smith, O. L. (C.)
Wilson, G. H (L.)
Louisville—Arnold, C. G. (L.)
Grigsby, G. P. (C.)
Haessler, F. H. (L.)
Hanes, G. S. (M.)
Moren, J. J. (M.)
Pirkey, M. E. (C.)
Newport—Berry, S. (M.)
Williamsburg—Smith, L. O. (L.)
Winchester—McKinley, D. H. (C.)

LOUISIANA

Bozzier—Whittington, A. C. (L.)
Monroe—McHenry, A. G. (C.)
New Orleans—Eidson, W. R. (L.)
St. Martinville — Fleming, P. H. (L.)
Welsh—Stewart, W. L. (L.)
Zona—Jones, H. V. (C.)

MAINE

Bangor—Carter, L. F. (L.)
Taylor, C. J. (L.)
Whitney, W. E. (C.)

MARYLAND

Baltimore—Botbyl, B. W. (L.)
Brent, H. W. (C.)
Denny, W. L. (L.)
More, J. E. (C.)
Hagerstown—Fleming, P. N. (L.)

MASSACHUSETTS

Boston—Brearton, E. J. (L.)
Fennessay, J. F. (C.)
Hoffman, M. (L.)
Norbury, F. G. (C.)
Reed, C. (C.)
Brookline—Fallon, J. F. (L.)
Cambridge—Andrews, R. E. (L.)
Leith, R. B. (C.)
East Long Meadow—Light, E. E. (L.)
Fall River—Stansfield, C. W. (L.)
Lowell—Livingston, C. B. (L.)
Quincy—Diehl, H. E. (L.)
Worcester—Hunt, E. L. (C.)
Woburn—Lane, C. G. (C.)

MICHIGAN

Ann Arbor—Sage, H. M. (L.)
Columet—Lisa, J. R. (C.)
Cassopolis—Harmon, C. M. (L.)
Detroit—Ballin, M. (M.)
Diebel, W. H. (C.)
McCord, C. P. (M.)
Mills, E. P. (C.)
Nuemann, A. J. (L.)
Shawan, H. K. (C.)
Manistee—Gunderson, E. A. (L.)
Snover—Angle, H. H. (C.)
Vermontville—McLaughlin, C. L. D. (L.)

MINNESOTA

Austin—Leck, C. C. (C.)
Cottonwood—Tharaldsen, T. (C.)
Duluth—Clark, C. H. (M.)
Eklund, W. J. (L.)
Hinckley—Kelsey, C. G. (C.)
Minneapolis—Cranmer, R. R. (L.)
Nevis—McCann, G. E. (L.)
St. Charles—Rollins, F. H. (C.)
St. Paul—Burns, F. W. (C.)
Colvin, A. R. (M.)
Jones, E. M. (M.)
Lewis, W. W. (C.)
Virginia—McDonald, C. A. (L.)
Wadena—Kenyon, P. E. (C.)
Winona—Lynch, G. V. (L.)

MISSISSIPPI

Laurel—Brown, H. L. (C.)
Richton—Walley, D. W. (L. C.)
South Haven—Wiley, H. W. (L.)
Variden—Alexander, C. D. (C.)
Vicksburg—Edwards, C. J. (L.)
Going, R. (L.)

MISSOURI

Hannibal—Waldo, E. E. (L.)
Jefferson Barracks — McBeath, N. E. (C.)
Kansas City—Gerstenkorn, R. E. (L.)
Lux, P. (L.)
Platte, R. B. (L.)
Whittaker, J. H. (L.)
Lancaster—Potter, W. A. (C.)
Lithium—Graff, J. H. (C.)
Odessa—Allen, C. H. (L.)
Reeds—Bragdon, G. H. (C.)
Springfield—Atherton, J. L. (L.)
St. Joseph—Kessler, E. B. (L.)
St. Louis—Bremser, H. L. (C.)

MONTANA

Helena—Cole, P. G. (C.)

NEBRASKA

Fairbury—Powell, M. J. (L.)
Omaha—Brown, A. C. (L.)
Johnson, A. A. (M.)

NEVADA

Ely—Alexander, I. (L.)

NEW HAMPSHIRE

Lancaster—Smith, H. B. (L. C.)

NEW JERSEY

Cape May—Marcy, V. M. D. (L.)
East Orange—Whitman, L. B. (L.)
Fredonia—Wheelock, H. E. (L.)
Laurenceville—Fee, E. K. (C.)
Newark—Markens, E. W. (C.)
McCabe, T. S. (C.)
Rottenberg, S. (L.)
Paterson—Golding, H. N. (L.)
Whippany — McCormack, W. G. (L.)

NEW YORK

Albany—Hacker, P. C. (C.)
Tebbutt, H. K., Jr. (C.)
Albion—Brodie, R. E. (M.)
Binghamton—Allerton, S. M. (C.)
Bagley, C. T. (L.)
Johnston, H. I. (L.)
Sears, F. W. (M.)
Blackwell's Island—Roane, S. C. (C.)
Brooklyn—Bergamini, H. M. (C.)
Berlin, L. (C.)
Costigan, L. H. (C.)
Danish, H. (L.)
Gold, L. (L.)
Goldstein, E. (L. C.)
Madden, J. J. (L.)
Nicol, C. F. (C.)
Pilcher, J. T. (M.)
Ward, J. F. (C.)
Buffalo—Grabau, J. C. (C.)
Gram, I. F. (C.)
Hall, G. M. (C.)
Delhi—Silliman, G. A. (L.)
Elmhurst—McCann, T. P. (L.)
Enfield Center—Robb, D. (C.)
Friendship—Johnson, H. M. (L.)
Geneseo—Newton, C. I. (M.)
Guilford—Buell, B. A. (L.)
Hempstead—Russell, H. C. (C.)
Storms, H. A. (L.)
Hoosick Falls—Nealon, W. F. (C.)
Hornell—Kelly, J. R. (C.)
Taylor, G. E. (C.)
Ilion—Jones, L. P. (L.)
Ithaca—Munford, S. A. (C.)
Tinker, M. B. (M.)
Jamestown—Hayes, F. W. (C.)
Manlius—Ballantyne, R. M. (C.)
Middletown—Donovan, J. C. (C.)
Stivers, M. A. (M.)
Mount Vernon—Kayser, C. D. (C.)
Sinnott, J. J. (C.)
New York—Atkins, L. R. (C.)
Auslander, M. (L.)
Bles, C. D. (C.)
Bookman, A. (C.)
Chaplin, H. (C.)
Corbett, S. F. (L. C.)
Coughlan, J. F. (C.)
Fitzgerald, A. J. C. (C.)
Goodman, C. (M.)
Gray, C. P. (C.)
Gross, H. (L.)
Hughes, J. C. (L.)
Jimenis, A. O. (C.)
Lancer, T. F. (M.)
Lebelson, I. (C.)
Meader, J. S. (C.)
Mason, F. R. (C.)
McFarland, W. L. (C.)
Morgan, W. A. (C.)
Phillips, B. G. (M.)
Reardon, W. I. (C.)
Reed, L. V. (L.)
Smith, M. D. (C.)
Smith, M. K. (C.)
Young, C. H. (L. C.)
Niagara Falls—Miller, G. L. (C.)
Ogdensburg—Meeker, J. E. (C.)
Worthing, H. J. (C.)
Onconta—Augustin, G. W. (M.)
Potsdam—Reynolds, R. J. (C.)
Richmond Hill — McGraw, R. J. (C.)
Rochester—Cassebeer, A. F. (C.)
Henry, J. P. (C.)
Rome—Grogan, W. L. (L.)
Schenectady—Early, L. J. (L.)
Schuylerville—Cleaver, R. S. (C.)
Southampton — Wheelright, J. S. (M.)
St. Johnsville—Beebe, G. W. (C.)
Syracuse—Hadley, L. A. (L.)
Parsons, J. J. (C.)
Truex, W. E. (C.)
Utica—Johns, M. W. (C.)
Mahady, S. A. (C.)
Westfield—Foster, R. F. (L.)
Yonkers—Benedict, A. N. (C.)

NORTH CAROLINA

Albemarle—Anderson, J. N. (L.)
Asheville—Dunn, W. L. (L. C.)
Cerro Gordo—Floyd, L. D. (C.)
Henderson—Tinsley, T. C. (L.)
Kinston—Peery, V. P. (L.)
Louisburg—Newell, H. A. (M.)
Morgantown—Vernon, J. W. (M.)
New-Bern—Pollock, R. A. (C.)
Rockwell—Choate, G. W. (C.)
Wadesboro—Covington, J. M. (C.)
Wilmington—Pridgen, C. L. (M.)

NORTH DAKOTA

Edgeley—Greene, L. B. (C.)
Hazen—Eastman, L. G. (C.)

OHIO

Akron—Heckert, H. R. (C.)
Bluffton—Soash, M. D. (L.)
Bremer—Brown, C. W. (C.)
Burton—Myler, T. F. (C.)

Cincinnati—Hatfield, W. H. (L.)
Cleveland—Bunts, F. E. (L. C.)
Colvin, B. B. (C.)
Pearce, R. G. (M.)
Spurney, A. B. (C.)
Columbus—Postle, C. D. (C.)
Dayton—Coleman, C. A. (C.)
Mansur, W. B. (C.)
Evansport—Kittredge, M. R. (L.)
Kinsman—Moore, L. G., Jr. (C.)
[illegible] (L.)
[illegible] C. (L.)
[illegible])
[illegible]
[illegible])
Zanesville—Walters, A. E. (C.)

OKLAHOMA

Fairfax—Bagby, E. L. (C.)
Okmulgee—Ming, C. M. (L.)

OREGON

New Pine Creek — Garner, J. L. (L.)
Portland—Brooke, L. W. (C.)

PENNSYLVANIA

Ardmore—Klein, T. (C.)
Doylestown — Swartzlander, J. R. (L.)
Easton—Detwiller, A. K. (M.)
Ellwood City — Schaffner, B. W. (L.)
Franklin—Thompson, A. C. (C.)
Hillsgrove—Mosher, J. S. (C.)
Johnstown—Stewart, H. M. (C.)
McKeesport — Ungerman, F. G. (L.)
Meadville—Clawson, F. A. (L.)
Philadelphia—Boston, F. E. (C.)
Keating, H. F. (C.)
Leopold, S. S. (L.)
Marks, J. K. (L.)
Newcomet, W. S. (M.)
Newlin, A. (M.)
Saul, C. D. (C.)
Segal, M. (L.)
Shannon, C. E. G. (C.)
Singer, S. (L.)
Williams, C. S. (M.)
Pittsburgh—Dearth, W. A. (L. C.)
Edmundson, T. P. (C.)
Ferner, J. J. (L.)
Scranton—Wainwright, J. M. (L. C.)
St. Mary's—Black, W. M. (L.)
Wilkes Barre — Sweeney, E. A. (C.)
Wyomissing—Lerch, C. E. (L.)

RHODE ISLAND

Woonsocket—Baxter, T. F. (C.)

SOUTH CAROLINA

Greenwood—Simmons, J. F. (L.)
Pelzer—Marton, W. T. (L.)

SOUTH DAKOTA

Lake Andes—Langley, C. S. (C.)

TENNESSEE

Aspen Hill—Herbert, R. N. (C.)
Cardiff—Wilson, G. E. (L.)
Centerville—Beasley, J. S. (L.)
Covington—Sale, W. W. (L.)
Fayetteville—Davis, M. B. (L.)
Knoxville—Acuff, H. (M.)
Lucy—Blackshore, W. M. (L.)
Maryville—Carson, J. E. (L.)
[illegible] C. K. (C.)
[illegible] (L. C.)
[illegible])
Jones, R. L. (C.)
Kennon, W. G. (C.)
Leach, J. L. (L.)
McCabe, W. M. (M.)
Smith, L. (M.)
Tigert, H. M. (M.)
Newport—McGaha, W. E. (L.)
Woods, J. O. (C.)

TEXAS

Aransas Pass—Noble, W. (L.)
Bartlett—Sutton, R. S. (C.)
Boerne—Nooe, J. F. (C.)
Bryans Mill—Kidwell, W. C. (L.)
Clayton—Adams, J. E. (C.)
Clifton—Carpenter, J. O. (L.)
Dallas—Davis, J. S. (C.)
Davilla—Macune, J. W. (L.)
Denton—Breihan, E. W. (C.)
Galveston—Heard, A. G. (C.)
Reading, W. B. (C.)
Kingsbury—La Forge, H. (L.)
Lane—Cravens, W. E. (C.)
Lockhart—Schwarz, E. G. (C.)
Madisonville—Connor, P. J. (C.)
McKinney—Largent, B. F. (C.)
Meridian—McDonald, J. F. (C.)
Paducah—Stone, F. E. (L.)
Shiner—Schulze, E. C. (L.)
Sweetwater—Dudgeon, L. O. (C.)
Thurber—Shackelford, J. A. (C.)

VIRGINIA

Galax—Davis, W. P. (L.)
Lynchburg—Rosenthal, S. H. (L.)
Norfolk—Noell, R. H. (L.)
Renn, G. A. (L. C.)
Williamson, T. V. (C.)
Pungoteague—Hiden, I. H. (C.)
Richmond—Craig, W. H. (L.)
Rudasill, C. L. (L.)
Shelton, T. S. (L.)
Sutherlin—Bailey, C. L. (L.)

WASHINGTON

Aberdeen—Austin, O. R. (M.)
Port Blakeley—Kellam, C. C. (C.)
Seattle—Baldwin, L. B. (C.)

WEST VIRGINIA

Moundsville—Ealy, D. B. (C.)
Omar—Rowan, W. S. (C.)
Tamroy—Seebert, J. E. (L.)
Wheeling—Drinkard, R. U. (L.)

WISCONSIN

Boyceville—Oliver, C. H. (L.)
Chippewa Falls—Wilkowske, C. W. (C.)
Franksville—Roth, W. C. (L.)
St. Croix Falls—Caldwell, H. C. (C.)
Waukesha—Davies, R. E. (C.)

WYOMING

Buffalo—Hynds, J. (S.)
Sunrise—Lowe, W. (L.)

MEDICAL OFFICERS, U. S. NAVY, RELIEVED FROM ACTIVE DUTY

CONNECTICUT

Bridgeport—Lambert, H. B.

DELAWARE

Wilmington—Cleaver, H. A.

DISTRICT OF COLUMBIA

Washington—Anderson, F.

ILLINOIS

Chicago—Anderson, T. O.
Tumpowsky, I. H.

MINNESOTA

Minneapolis—Henry, C. E.
Owatonna—Smersh, J. F.

MISSOURI

St. Louis—North, E. P.

NEW YORK

New York—Mulholland, J. A.
Riegel, J. A.
Staffa, A. W.
White Plains—Hammond, R. B.

NORTH CAROLINA

Lawinburg—James, A. W.

OHIO

Cleveland—Biddinger, A. E.

PENNSYLVANIA

Manheim—Martin, D. W.
Philadelphia—Thompson, R. H.

ORDERS TO OFFICERS OF THE MEDICAL CORPS, U. S. ARMY

Arkansas

To Fort McPherson, Ga., from Camp Lee, Lieut. E. B. BUCHANAN, Texarkana.

California

To Camp Dix, N. J., from Tobyhanna, Pa., Capt. C. B. ADAMS, Los Angeles.

To report to the commanding general, Western Department, from Fort D. A. Russell, Major J. E. McKILLOP, Huntington Beach; Lieut. R. S. CARTER, San Diego.

Colorado

To Walter Reed General Hospital, D. C., for instruction, and on completion to his proper station, from Fort Ontario, Capt. E. D. BURKHARD, Delague.

To Washington, D. C., from San Diego, Capt. F. L. DENNIS, Colorado Springs.

Connecticut

To Boston, Mass., from Camp Dix, Capt. E. F. McGOVERN, Bridgeport.

To Camp Zachary Taylor, Ky., base hospital, from Camp Dix, Lieut. J. H. T. SWEET, Jr., Hartford.

To Fort McPherson, Ga., from Camp Jackson, Capt. W. F. COLLINS, New Haven.

District of Columbia

To Army Medical School for instruction, from Camp Devens, Lieut. I. C. RIGGIN, Washington.

Georgia

To Camp Benning, Ga., from Camp Jackson, Capt. W. R. McCOY, Danielsville.

Illinois

To Camp Grant, Ill., base hospital, from Fort Riley, Capt. H. H. SHEETS, Oregon.

To Fort Dupont, Del., from Edgewood, Md., Capt. J. M. HUBER, Chicago.

To Fort McHenry, Md., from Camp Dix, Lieut. I. H. CUTLER, Chicago.

To Fort Sheridan, Ill., from Camp Dix, Capts. E. A. CHRISTOFFERSON, H. C. SCHUMM, Lieut. E. HANS, Chicago.

To Philadelphia, Pa., from Camp Dix, Capt. W. C. SWEET, Chicago.

Indiana

To Camp Dodge, Iowa, from New Cumberland, Pa., Lieut. S. M. COMPTON, Forest.

To Camp Jackson, S. C., base hospital, from Camp Sevier, Capt. O. E. FINK, Terre Haute.

To Fort Leavenworth, Kan., from Fort Benjamin Harrison, Lieut. E. B. M. CASEY, Attica.

To Fort Sheridan, Ill., from Camp Dix, Lieut. R. A. GILMORE, Michigan City.

The following orders have been revoked: *To Denver, Colo.,* from Camp Dix, Lieut. R. W. REID, Union City. *To Fort Riley,* from Camp Shelby, Capt. H. M. SHULTZ, Logansport.

Iowa

To Camp Dodge, Iowa, base hospital, from Camp Dix, Lieut. R. R. KULP, Davenport.

To Waco, Tex., Rich Field, from Fort Sill, Lieut. J. T. McBRIDE, Des Moines.

Kansas

To Fort Riley, base hospital, from Chicago, Lieut. C. H. SMITH, Pittsburg; from Fort Snelling, Capt. S. M. MYERS, Potter.

Kentucky

To Cape May, N. J., for instruction in the diagnosis and treatment of peripheral nerve injury cases, from Fort Thomas, Lieut.-Col. J. T. AYDELOTTE.

To Detroit, Mich., from Camp Dix, Lieut. H. L. PELLE, Louisville; from Charleston, Lieut. C. E. VIDT, Russell.

To Fort McPherson, Ga., from Camp Sevier, Lieut. J. T. MALONE, Jr., Louisville.

To Fort Riley, from Camp Zachary Taylor, Capt. F. M. WALKER, Louisville.

To Hoboken, N. J., from New Cumberland, Pa., Lieut. O. F. HUME, Mackville.

To Philadelphia, Pa., from Camp Dix, Capt. L. W. FRANK, Louisville.

Louisiana

To Walter Reed General Hospital, D. C., from Fort McPherson, Lieut. R. S. KEMP, New Orleans.

Maryland

To Camp A. A. Humphreys, Va., camp hospital, from Edgewood, Lieut. J. F. LUTZ, Baltimore.

To Fort McHenry, Md., from Camp Dix, Lieut. C. C. KELLY, Baltimore; from Garden City, Lieut. V. L. MAHONEY, Catonsville.

To Spartanburg, S. C., from Camp Travis, Capt. I. I. HIRSCHMAN, Baltimore.

To Walter Reed General Hospital, D. C., from Camp Dix, Lieut. I. ZADEK, Baltimore; from Roland Park, Capt. I. K. LOVETT. For instruction, and on completion *to his proper station,* from Camp Meade, Lieut. G. R. MICKLETHWAITE, Baltimore.

Massachusetts

To Army Medical School for instruction, from Camp Grant, Lieut. J. H. MURPHY, Dorchester.

To Boston, Mass., from Baltimore, Capt. J. B. AYER, Boston.

To Camp Devens, Mass., base hospital, from Plattsburg Barracks, Capt. E. S. JOHNSON, New Bedford.

To Fort Benjamin Harrison, from Camp Dix, Lieut. W. A. JILLSON, Westborough.

Michigan

To Camp Custer, Mich., from Long Island, Lieut. W. A. HYLAND, Grand Rapids.

To Chicago, Ill., from North Charleston, Capt. E. SMITH, Jr., Detroit.

To Detroit, Mich., from Camp Dix, Capt. T. B. MARSDEN, Detroit.

To Fort Riley, base hospital, from Camp Dix, Capt. C. G. WENCKE, Battle Creek.

To Walter Reed General Hospital, D. C., for instruction, and on completion to his proper station, from Detroit, Capt. T. S. MEBANE.

Minnesota

To Dover, N. J., from Camp Jackson, Capt. FAVOUR, Jr., Red Lake.

To Fort Moultrie, N. C., from Fort Oglethorpe, Capt. E. SCHONS, St. Paul.

To Fort Riley, from Camp Zachary Taylor, Lieut. F. W. WHITMORE, St. Paul.

The following order has been revoked: *To Fort Snelling, Minn.,* from Camp Dodge, Capt. F. M. MANSON, Worthington.

Missouri

To Biltmore, N. C., from Camp Upton, Capt. J. R. GREEN, Independence.

To Fort Benjamin Harrison, from Camp Dix, Capt. H. UNTERBERG, St. Louis.

To Fort Riley, from Plattsburg Barracks, Capt. H. M. LARUE, Kansas City.

To Fort Sheridan, Ill., from Camp Dix, Lieut. J. C. ROTTER, St. Louis.

To Mineola, N. Y., Hazelhurst Field, from Waco, Tex., Capt. D. APPLEBERRY, Belleview.

The following order has been revoked: *To Fort McPherson, Ga.,* from Fort Sill, Capt. T. J. LYNCH, St. Joseph.

Nebraska

To Fort Des Moines, Iowa, from Camp Dix, Major J. M. HENCH, Omaha.

To Muscle Shoals, Ala., from Camp Boyd, Lieut. C. W. PARKS, Lincoln.

New Hampshire

To Walter Reed General Hospital, D. C., for instruction, and on completion *to his proper station,* from Williamsbridge, Major J. J. POWERS, Manchester.

New Jersey

To Army Medical School, from Camp Dix, Capt. I. D. MINGOS. For instruction, from Camp Dix, Capt. K. F. KESMODEL; from Hoboken, Capt. J. R. DeVELLING.

To Camp John Wise, Tex., from Camp Kelly, Lieut. R. D. HENDERSON, Jersey City.

To Garden City, N. Y., from Camp A. A. Humphreys, Capt. H. D. McCORMICK, Kenvil.

New York

To Army Medical School for instruction, from Governor's Island, Major F. K. HERPEL.

To Camp Dodge, Iowa, base hospital, from Hoboken, Lieut.-Col. J. E. DAUGHERTY, Brooklyn.

To Colonia, N. J., from Hoboken, Capt. J. C. FISK, New York.

To Detroit, Mich., from Camp Jackson, Capt. H. A. GRIFFIN, New York.

To Fort Riley, from Chicago, Capt. A. I. LOWENTHAL, New York.

To Hoboken, N. J., from Camp Jackson, Capt. A. W. BRENNAN, Syracuse.

To Philadelphia, Pa., from Camp Dix, Major C. A. SQUIRES, Binghamton.

To report to the commanding general, Eastern Department, from Surgeon-General's Office, Col. T. W. SALMON, New York.

To Walter Reed General Hospital, D. C., from Camp Dix, Major E. T. WENTWORTH, Rochester.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Capt. J. M. FLYNN, Rochester.

To West Point, Miss., Payne Field, from Riverside, Lieut. H. M. SMITH, Olean.

The following orders have been revoked: *To Camp Dix, N. J.,* base hospital, from Pittsburgh, Capt. J. J. SINNOTT, Mount Vernon. *To Fort Benjamin Harrison,* from Walter Reed General Hospital, Lieut. J. HARKAVY, New York.

North Carolina

To Fort McPherson, Ga., from Camp Dix, Capt. T. E. WILKERSON, Raleigh.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Capt. R. S. CLINTON, Gastonia.

Ohio

To Camp Grant, Ill., base hospital, from Walter Reed General Hospital, Capt. C. L. IRELAND, Columbus.

To Camp Sherman, Ohio, base hospital, from Camp Dix, Lieut. G. F. BARNETT, Painesville.

To Fort Douglas, Utah, from Camp Sherman, Capt. W. E. RANZ, Youngstown.

To Fort Sheridan, Ill., from West Baden, Capt. A. N. WISELEY, Ada.

To New Haven, Conn., from Camp Jackson, Major A. B. SMITH, Elyria.

To Walter Reed General Hospital, D. C., from Hoboken, Capt. K. D. FIGLEY, Toledo.

Oklahoma

To Fort Oglethorpe, from Camp Dix, Capt. W. W. WOODY, Tulsa.

To Mineola, N. Y., Hazelhurst Field, from West Point, Capt. D. A. MYERS, Lawton.

The following order has been revoked: *To Camp Logan, Tex.,* Lieut. E. A. LEISURE, Fairfield.

Oregon

To Washington, D. C., Bolling Field, from Riverside, Lieut. C. W. ROBBINS, Gold Beach.

Pennsylvania

To Camp Boyd, Tex., from Muscle Shoals, Ala., Lieut. A. F. KLUTZ, Philadelphia.

To Camp Dix, N. J., base hospital, from Camp Lee, Lieut. J. G. LOGUE, Williamsport.

To Cape May, N. J., from Camp Dix, Capt. B. F. BUZBY, Philadelphia.

To Detroit, Mich., from Camp Dix, Capt. L. F. STEWART, Clearfield; Lieut. F. P. McCARTHY, Erie.

To Fort McHenry, Md., from Camp Dix, Major W. BATES, Philadelphia; from Surgeon-General's Office, Lieut.-Col. E. L. ELIASON, Philadelphia.

To Fox Hills, N. Y., from Camp Dix, Capt. E. W. COLLINS, Philadelphia.

To Lakewood, N. J., from Camp Dix, Lieut. R. L. LEVERTON, Athens.

To Mineola, N. Y., from Camp John Wise, Capt. C. H. KETTERER, Butler.

To Walter Reed General Hospital, D. C., from Fort McHenry, Lieut. F. S. CHAMBERS, Philadelphia. For instruction, and on completion *to his proper station,* from Fort McHenry, Lieut. N. A. TIMMONS, South Bethlehem.

Porto Rico

To Fort McHenry, Md., from Camp Las Casas, Capt. P. R. CASELLAS, San Juan.

Rhode Island

To Walter Reed General Hospital, D. C., from Lakewood, Lieut. H. D. CLOUGH, Providence. For instruction, and on completion *to his proper station,* from Camp Meade, Lieut. J. E. McCABE, Providence.

South Carolina

To report to the commanding general, Eastern Department, from Camp Jackson, Col. T. J. KIRKPATRICK, Jr.

Tennessee

To Fort McPherson, Ga., from Camp Lee, Capt. D. R. PICKENS, Nashville.

To Walter Reed General Hospital, D. C., for instruction, and on completion *to his proper station,* from Fort Benjamin Harrison, Lieut. H. C. LONG, Chattanooga.

Texas

To Biltmore, N. C., from Philadelphia, Major V. V. CLARK, Estelene.

To Camp Pike, Ark., base hospital, from Fort Sheridan, Lieut. F. W. CARRUTHERS, Dallas.

To Chicago, Ill., from Camp Dix, Lieut. M. O. REA, Pottsville.

To Detroit, Mich., from Camp Dix, Capt. L. E. DEVENDORF, Taft.

To Fort Sam Houston, Tex., base hospital, from Camp Dix, Lieut. J. R. WHISENANT, San Antonio.

To Mineola, N. Y., Hazelhurst Field, from San Antonio, Lieut. W. A. BLACK, Marlin.

Utah

To Fort Bayard, N. M., from Camp Dix, Major H. T. WICKERT, Huntsville.

To Hoboken, N. J., from Camp Jackson, Capt. D. K. ALLEN, Salt Lake City.

Vermont

To Walter Reed General Hospital, D. C., for instruction, and on completion *to his proper station,* from Fort McPherson, Lieut. H. F. TAYLOR, Hardwick.

Virginia

To Mineola, N. Y., Hazelhurst Field, from Arcadia, Capt. S. E. BROWN, Norfolk.

To Spartanburg, S. C., from Camp Lee, Major F. H. MILLS.

To Walter Reed General Hospital, D. C., for instruction, and on completion *to his proper station,* from Hoboken, Capt. L. N. HARRIS, Harrisonburg.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Major F. M. HODGES, Richmond.

Washington

To Fort Des Moines, Iowa, from Camp Dix, Lieut. H. T. BUCKNER, Seattle.

West Virginia

To Walter Reed General Hospital, D. C., for instruction, and on completion *to his proper station,* from Biltmore, Capt. C. R. IRVING, Hansford.

Wisconsin

To Fort Sheridan, Ill., from Fairfield, Ohio, Capt. E. G. FESTERLING, Reedsville.

Wyoming

To Fort Douglas, Utah, from Camp Dodge, Capt. J. H. HOLLAND, Evanston.

ORDERS TO OFFICERS OF THE UNITED STATES PUBLIC HEALTH SERVICE

Asst. Surg.-Gen. J. W. SCHERESCHEWSKY, proceed to Newport News, Va., and Wilmington, N. C., to inspect research work in sewage disposal.

Asst. Surg.-Gen. T. CLARK (Reserve), proceed to Perryville, Md., to inspect schools to determine whether building should be used as school or hospital.

Surg. JAMES A. NYDEGGER, deliver four lectures on quarantine and immigration at the School of Hygiene, Johns Hopkins University, Baltimore, Md., May 9, 14, 16 and 21.

Surg. JOHN McMULLEN, represent the Service at the School for County and City Officers at Louisville, Ky., May 12-15.

Passed Asst. Surg. R. C. DERIVAUX, represent the Service at the annual meeting of the Central of Georgia Railway Surgeons' Association at Macon, Ga., May 14-15.

Passed Asst. Surg. J. G. TOWNSEND, proceed to Rosedale, Kan., to attend the school for Kansas health officers to be held the week of May 12.

Asst. Surg. THOMAS PARRAN, Jr., proceed to Seneca, Md., for the purpose of giving a talk on rual sanitation on the evening of May 7.

Acting Asst. Surg. E. E. CABLE, proceed to Norfolk, Va., to consult with the Commissioner of Health in reference to the installation of clinic tables.

Acting Asst. Surg. R. E. GRAMLING, proceed to Burley, Idaho; to present the government's program for the control of venereal diseases on June 16 and 17.

Acting Asst. Surg. J. C. MONTGOMERY, proceed to Rosedale, Kan., to attend the school for Kansas health officers to be held the week of May 12.

Acting Asst. Surg. A. R. PILLSBURY, relieved at Hartford, Conn., proceed to the U. S. Public Health Service Hospital at Dansville, N. Y., for duty.

Acting Asst. Surg. FRANKLIN M. SEIBERT, proceed to Palo Alto, Calif., for duty in the U. S. Public Health Service Hospital.

Acting Asst. Surg. MELVIN J. TAYLOR, proceed to the U. S. Public Health Service Hospital at Dansville, N. Y., for duty.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ILLINOIS

New Officers.—At the annual meeting of the Shelby County Medical Society, held in Shelbyville, April 10, Dr. Edgar D. Kerr, Westervelt, was elected president; Dr. William G. Turney, Cowden, vice president, and Dr. Roy W. Johnson, Shelbyville, secretary-treasurer.

Personal.—Dr. Albert N. Mueller, health commissioner of Rock Island from 1909 to 1911, and in 1914 and 1915, has been reappointed health commissioner. —— Dr. Herbert Wheeler, for nearly forty years a practitioner of Grant Park, has disposed of his practice and retired from business.—— Dr. Frank G. Andreen has been elected president of the board of trustees of the village of Orion.——Dr. George F. Johnson has been elected mayor of East Moline.

Fort Sheridan Now Military Hospital.—Companies I and G of the Twentieth Infantry, the last of the soldiers of the line remaining at Fort Sheridan, received orders, May 5, to proceed to Fort Riley, Kan., and nothing now will remain at Fort Sheridan excepting the Base Hospital No. 28, under command of Col. William N. Bispham, and the necessary military help.——Major-Gen. Leonard Wood and his staff will reside at Fort Sheridan for the summer.

Tuberculosis Clinic.—A tuberculosis clinic was held in Princeton, May 6, under the auspices of the board of directors of the Bureau County Tuberculosis Sanatorium, acting in conjunction with the Illinois Tuberculosis Association. The program included a discussion of "The Medical Tuberculosis Program for the Progressive County," "Case History in the Diagnosis of Tuberculosis," "Essentials in the Diagnosis of the Early Tuberculosis," and "Inspection in Diagnosis in Early Tuberculosis." The discussion was followed by clinical demonstrations.

Chicago

Blunt Loses Legal Battle.—Dr. Arthur L. Blunt, after a long fight to keep from serving a term in the federal penitentiary for violation of the Harrison Narcotic Act, left for Leavenworth, Kan., May 8, to serve a sentence of two and a half years imprisonment in the federal penitentiary.

Home for Incurables Changes Name.—In recognition of the aid it received from the late Harlow N. Higginbotham, the name of the Chicago Home for Incurables is to be changed to the Higginbotham Home. Mr. Higginbotham was active in the management of the institution for thirty-eight years.

Dedication of Hospital.—At the dedication service of the new Mt. Sinai Hospital, held March 4, the principal address was made by Ignatius Bernard; a fund of $3,500 was started to purchase a roentgen-ray equipment; $1,000 was raised by the auction of door keys, and more than $1,000 was received in donations, by the selling of ward and room privileges. The building has cost about $150,000, and 100 beds are ready for immediate use.

The Speedway Hospital.—Comptroller Warrick of the treasury, ruled, May 3, that the act of Congress providing $3,000,000 for the acquisition by the U. S. Public Health Service of the Speedway Hospital project was not mandatory. Secretary Glass has under consideration a recommendation that the hospital building be purchased for $2,500,000 and the remaining $500,000 of the appropriation be spent in completing and equipping the buildings.

Personal.—Ernest E. Irons, Lieut.-Col., M. C., U. S. Army, has returned from service and resumed practice.——Albert E. McEvers, Major, M. C., U. S. Army, recently returned from overseas, was slightly injured, May 4, when the horse which he was riding, stumbled while attempting to clear a barrier for jumpers, in Lincoln Park.——Walter J. Sullivan, Capt., M. C., U. S. Army, who has been on service with the Fiftieth Division, Fifth British Army, since October, 1917, and who was wounded by a high explosive shell at Chemin des Dames, and after five months in a hospital was transferred to a hospital ship, and later to Malta, has returned from Europe.——Dr. Stephen R. Pietrowicz, James A. Britton and Max Biesenthal have been appointed by the executive committee of the Chicago Tuberculosis Institute, an advisory committee for the president and members of the board of county commissioners, in matters affecting tuberculosis hospitals.——William H. G. Logan, Col., M. C., U. S. Army, has returned from an inspection tour of European military hospitals.——Harry D. Orr, Lieut.-Col., M. C., U. S. Army, has been promoted to colonel and made division surgeon of the Thirty-Third Division.

Conference of Foreign Experts on Child Welfare.—At the invitation of President Wilson, Secretary of Labor, William B. Wilson, and Miss Julia Lathrop, head of the Children's Bureau, ten of the most distinguished foreign experts on child welfare will be present at a two-day conference at the Congress Hotel, May 19 and 20. The foreign speakers are Dr. René Sand, Belgium, professor of social and industrial medicine at the University of Brussels and advisor on medical inspection of the Ministry of Labor; Sir Arthur Newsholme, England, chief medical officer of the local government board; Mrs. Eleanor Barton of the Woman's Cooperative Guild, an organization of the wives of British wage earners which advocates the national protection of maternity and infancy; Sir Cyril Jackson, board of education, London; R. C. Davison, director of the juvenile labor exchanges of England; Dr. C. Mulon of the French War Department, who supervised creches maintained in connection with munition plants; Prof. Fabio Frassetto, Italy, professor of anthropology at the University of Bologna; Mr. Takayuki Namaye, in charge of reformatory and relief work and the protection of children for the Japanese Interior Department; Dr. Radmila Lazarevitch Milochevitch, Serbia, a leader in social service activities; Señorita María de Maeztu, Spain, in charge of child welfare work. Discussions will be held concerning (a) the economic and social basis for child welfare standards, (b) protection of the health of mothers and children, (c) child labor, and (d) children in need of special care.

INDIANA

Summoned Before Board.—The State Board of Registration and Examination has, it is said, cited Dr. George Koons to appear before it and show why his license to practice medicine in Indiana should not be revoked. It is alleged that Dr. Koons is guilty of the violation of the Indiana narcotic law and that on March 25, he was fined $25 and costs and sentenced to imprisonment in the county jail for ninety days, but that the jail sentence later was suspended.

Hospital Items.—Irene Byron Tuberculosis Hospital, Allen County, was opened to the public last month.——An appropriation of $135,000 has been made by the Madison County council for a county tuberculosis hospital, to be located one mile southwest of Pendleton, where a tract of 107 acres, including Idlewold, a summer resort, has been purchased for $35,000.——J. M. Miller, Upland, has offered the Grant County commissioners, 133 acres of land for a new county tuberculosis sanatorium.

Personal.—Dr. Edward E. Long, Shoals, has been appointed health commissioner of Martin County.——Dr. Guy W. Seaton has returned to Indianapolis after a year in Washington, D. C.——Carleton B. McCulloch, Lieut.-Col., M. C., U. S. Army, chief surgeon of Base Hospital No. 32, has been cited for bravery by the French government.——The home of Dr. John A. M. Aspy, Hope, was burned recently with a loss of $3,000.——Dr. Paul E. Bowers, state prison physician, Michigan City, who is at present on leave of absence on duty in war service at Sawtelle, Calif., has resigned.—— Dr. Lloyd A. Elliott has returned from France and resumed his duties as secretary of the health department of Elkhart. ——Dr. Clarence E. Cobb, superintendent of the Healthwin Sanatorium, South Bend, has resigned and has been succeeded by Dr. Robert C. Kirkwood, formerly chief of the medical service at the U. S. Army Sanatorium, Fort Bayard, N. M.——Dr. Adah McMahon, Lafayette, who went to France in August, 1918, to work in military hospitals, returned to the United States, April 25.

KANSAS

Welcome Returning Medical Officers.—The Reno County Medical Association, at its meeting, March 31, extended an official welcome to the members of the society who recently returned from military service.

Personal.—Dr. John R. Scott, Major, M. C., U. S. Army, has been promoted to Lieut.-Col., M. C.——Dr. Benjamin F. Williams, Lincoln, has been appointed a member of the

State Board of Control, for a term of two years, beginning July 1.——Dr. Alexander Haggart, Elgin, has been under treatment in the Swedish Hospital, Kansas City, Mo., for the removal of a lipoma located in the submaxillary space and adherent to the carotid artery.

New Officers.—At the annual meeting of the Seventh District Medical Society, held in Hutchinson, the following officers were elected: president, Dr. Boyd H. Pope, Kingman; vice presidents, Drs. John T. Scott, St. John, and John A. Dillon, Larned; secretary-treasurer, Dr. William F. Schoor, Hutchinson.——The annual meeting of the Golden Belt Medical Society was held in Junction City, April 3, and the following officers were elected: president, Dr. Alfred O'Donnell, Ellsworth; vice presidents, Drs. Benjamin Brunner, Wamego, and Clarence C. Goddard, Leavenworth, and secretary-treasurer, Dr. James D. Colt, Manhattan.

MARYLAND

Personal.—Henry J. Walton, Baltimore, Capt., M. C., U. S. Army, has been released from active service and has resumed his work as head of the roentgen-ray department at the University of Maryland Hospital.——Dr. Martin F. Sloan, superintendent of Eudowood Sanatorium, Towson, has returned to his post after a visit of several weeks at his home in San Antonio, Texas.

Evergreen, Jr., Hospital Under Red Cross Control.— U. S. Army General Hospital No. 7, Evergreen, Jr., has recently reverted from military to Red Cross control. The work of the reeducation of soldiers blinded in the war will be under the general management of Mr. L. W. Wallace, while Col. James Bordley, Baltimore, will remain at Evergreen, Jr., as director of the Red Cross Institute, with Charles F. Campbell as his assistant.

MINNESOTA

Advance Date of Meeting.—The chairman of the program committee of the Southern Minnesota Medical Association announces that conditions have arisen to make it necessary to change the day of the summer meeting to be held at Rochester, from June 30 and July 1, as originally announced, to June 23 and 24.

Personal.—Dr. Robert I. Hubert has been confirmed as chief city health officer of St. Paul, succeeding Dr. Gustav A. Renz, deceased.——Kenneth Taylor, Major, M. C., U. S. Army, St. Paul, has been promoted to the rank of Lieutenant-Colonel and placed in charge of medical work in the Balkans, Palestine and Poland, with headquarters in Paris.——Dr. Edward H. Nelson, formerly mayor of Chisholm, has been appointed health officer of the village.

MISSOURI

Personal.—Dr. E. Haydn Trowbridge has moved his school for nervous and backward children from the suburbs of Kansas City to Kansas City.

Meeting Night Changed.—The St. Louis Medical Society has voted to change its meeting night from Saturday to Tuesday, by a vote of 350 to 96.

Practitioners Fined.—Mrs. Mary Thiel of St. Louis was arrested by the Department of Registration and Education of the State of Illinois for practicing midwifery in Madison County, Ill., without a license and was fined $130.——Dr. Willis V. Smith, Kansas City, charged with prescribing narcotics without first giving addicts a physical examination, thus violating the city ordinance, is said to have been found guilty and fined $1,000, April 21. Six drug addicts were arrested with Dr. Smith, of whom one forfeited a bond of $200; one was fined $50 and sent to the workhouse and the other four were each fined $100 and paroled on condition that they remain away from the physician's office.

The Hyde Case.—After a trial lasting nearly the entire day, Judge Harris Robinson of the assignment division of the circuit court took under advisement the mandamus suit brought by Dr. B. Clark Hyde to compel the Jackson County Medical Society to rescind an order expelling him from the society. It is reported that Judge Robinson believes that the county has the right to try Dr. Hyde on the charge of writing the letter and may take such action as it may see fit, for it is entirely for the members of the medical society to decide whether or not Dr. Hyde is guilty of gross misconduct. The sole question at this time was, in his opinion, whether or not the state medical association had any right to act on an appeal from the Jackson County Medical Society and to order the expulsion of Dr. Hyde from that society.

NEW YORK

Society Bars Reporters.—At a meeting of the Albany Medical Society, April 8, it was voted to exclude all newspaper reporters from future sessions, and it was further decided that no information regarding the proceedings of the society shall be given to the public without having first been passed on by the board of censors.

State May Use Army Hospitals.—The State Hospital Commission has been instructed to inspect the U. S. Naval Hospital at Ward's Island and the army hospitals at Camp Mills and Camp Upton with a view to determining if they can be taken over by the state and used to house insane patients. At present the existing state hospitals are overcrowded to the extent of more than 6,000 patients.

Masonic Memorial Hospital.—At a meeting of the Grand Lodge of the state in New York City, recently, it was reported that a Masonic soldiers' and sailors' memorial hospital is to be built in Utica at a cost of $370,000. The institution will provide free medical care and maintenance for all service men of the order who make application and whose physical condition makes such care desirable.

Women's Medical Society Elects.—The Women's Medical Society of the State of New York at its annual meeting held in Syracuse, May 5, elected the following officers: president, Dr. Elizabeth Burr Thelberg, Poughkeepsie; vice presidents, Drs. Florence I. Staunton, Utica; Sarah J. McNutt, Ne York City, and Mathilda K. Wallin, New York City; secretary, Dr. Ethel D. Brown, New York City, and treasurer, Dr. Phoebe M. B. VanVoast, New York City.

New York City

Army Hospitals Ordered Closed.—Orders have been issued by Surg.-Gen. Merritte W. Ireland for the abandonment before June 1, of Debarkation Hospital No. 5, at the Grand Central Palace, the army hospital at the Rockefeller Institute, and the one at the Hotel Nassau, Long Beach, L. I. Emergency Hospital No. 4, which is at the Polyclinic Hospital, is also to be given up as a clearing house for men forwarded from base hospitals. About 17,000 wounded men have passed through the debarkation hospital at Grand Central Palace.

Conference on Narcotic Drugs.—A conference of the heads of various city departments was held recently at which a demand was voiced for more stringent laws covering the sale of narcotic drugs and explosives. Health Commissioner Royal S. Copeland submitted recommendations for handling the problem, calling for: (1) definition of drug addicts; (2) registration and identification of drug addicts; (3) passage of a law making it a misdemeanor for a physician to prescribe drugs for an addict without this identification card or for a druggist to honor a prescription without identification; (4) passage of a law making it a misdemeanor to sell narcotics without a prescription; (5) regulation by the State Narcotic Commission of amendments to the sanitary code on the subject.

Personal.—Col. A. Depage, Belgium, is accompanying Col. John Van Schaick, Jr., commissioner for Belgium, for the American Red Cross to this country and will deliver a number of addresses before medical societies thanking Americans for their contributions to Belgian relief.——William Darrach, Col., M. C., U. S. Army, has been appointed dean of the College of Physicians and Surgeons of Columbia University to succeed Dr. Samuel W. Lambert, whose resignation was accepted by the trustees of the university about a month ago. Colonel Darrach returned to this country in April.——Dr. Abraham Jacobi celebrated his eighty-ninth birthday on May 6. He received many friends who called to pay their respects.——Dr. William E. Studdiford has been appointed professor of obstetrics and gynecology in the College of Physicians and Surgeons to succeed Dr. Edwin Bradford Cragin.

NORTH CAROLINA

Personal.—Dr. John W. Long, Greensboro, formerly Lieut.-Col., M. C., U. S. Army, and commanding officer of Base Hospital Unit 65, A. E. F., was the orator of the day at the Memorial Day exercises in Greensboro, May 10.

Scavenger Supervision.—The supreme court in a recent decision in the case of Ratchford versus the city of Gastonia has established the validity of a city ordinance prescribing city supervision of the scavenger service and with a levy for such service against the property owners on which the surface closets are located.

Report on Venereal Disease.—The first report on venereal disease in the state as provided for by recent enactment has just been received by the state board of health. According to to the available data for the first month there were reported only 211 cases of gonorrhea; 131 of syphilis; five cases of gonorrhea and syphilis; two cases of gonorrhea and chancroid, and two cases of gonorrhea, syphilis and chancroid. Buncombe county led with forty-four cases, followed by Mecklenburg with forty-two, but Wake county, equally populous, reported only two cases of venereal disease. Better reports are expected by the board as physicians become familiar with the recent legislative enactments.

OHIO

Personal.—Dr. Frank Winders, Major, M. C., U. S. Army, Columbus, director of the medical service at Hoboken, N. J., has been promoted to Lieut.-Col., and has returned from service and will resume practice.——Dr. William H. Booth, Fremont, who underwent operation at the Toledo Hospital recently, has recovered and resumed practice.——Dr. Harry L. Rockwood, acting health commissioner of Cleveland, has received a permanent appointment as health commissioner.

Fight Against Trachoma.—A fight against trachoma is being waged in Portsmouth by state and city officials jointly. The campaign is of interest to other Ohio River cities, in many of which trachoma is believed to be prevalent. As a result of a survey which disclosed hundreds of trachoma cases among Portsmouth schoolchildren, a free clinic has been established. Schoolchildren are being examined and all found with the disease are receiving treatments. It is estimated that there are not fewer than 1,000 trachoma cases in Portsmouth, and a similar situation is believed to exist in other sections which have received heavy immigration from the mountainous southern states, where the disease has long been prevalent.

Hospital District Legislation.—Changes recently made in the laws governing tuberculosis hospitals do not forecast any change in the policy of the state toward these institutions. The hospital measures passed are: The Harter bill, permitting a county which holds membership in a tuberculosis hospital district to provide additional local facilities at its own expense for the care of tuberculosis sufferers, if the district hospital fails to provide adequate accommodations; the Crosser bill, authorizing a county in a hospital district to withdraw from membership and sell its interest to any other county in the district, if this action is approved by the state department of health, and the Gardner bill, authorizing a county in which a municipal tuberculosis hospital is located to establish a county hospital or to buy or lease the existing municipal hospital. All of these measures were drawn to fit special cases. The first two were designed to provide a means of settling difficulties between the counties in the Springfield Lake Sanatorium district, comprising Summit, Stark, Portage, Mahoning and Columbiana counties. The Gardner bill is intended to provide a means to transform the Cincinnati municipal hospital into a county institution. Under former law, no authority for the establishment of county hospitals exists and a county in which a municipal hospital exists may not enter a district organization. "The district hospital law remains unchanged in its essential details," says the state department of health, "and the policy of the department will be to continue encouraging the development of additional districts." Five district tuberculosis hospitals are in operation and two other proposed districts have effected preliminary organizations. Any group of from two to ten counties may by voluntary organization join in establishing a district. It is estimated that the state now has hospital accommodation for only one third of the tuberculosis sufferers who need hospital care.

Cincinnati

Personal.—Dr. Mark E. Bowles, district physician, has resigned.——Egbert W. Fell, Major, M. C., U. S. Army, chief of the neuropsychiatric section of the Walter Reed General Hospital, Washington, D. C., has been released from service and has been appointed resident clinical director of the Cincinnati Sanatorium, College Hill.

Health Prevention Work.—The city health department has asked an appropriation of $194,000 to be used in 1920 for the various phases of preventive disease work. The chief factors planned are special work in tuberculosis among negroes, the establishment of a new division on public health education, the reorganizing of the nursing service so as to have a separate bureau on public health nursing, and the inauguration of a new division on industrial hygiene.

New Department Established by University.—The University of Cincinnati has established in its college of medicine a department in industrial medicine and public health. Under the plans submitted, $100,000 is to be raised by the citizens' committee on finance, for the support of this department for five years. The traning which will be received in this department will make the students competent social and medical engineers and will also enable them to educate the general public as to the value of good health. The course in the new department will be started in October and will be open to graduates in medicine. A portion of the instruction will be given at the college and part at various industrial establishments along the lines now practiced in the cooperative course.

PENNSYLVANIA

Physicians Oppose Narcotic Tax Law.—Pittsburgh physicians, through the Allegheny County Medical Society, have made a protest against the recent amendment to the Harrison law, which increases the tax imposed on the members of the medical profession from $1 to $3. The resolution calls the measure "unjust discrimination against the medical profession in imposing on its members the federal support of a measure distinctly in the interest of the public," and calls for the repeal of the law.

Personal.—Dr. William W. Jones, Pittsburgh, has been commissioned captain in the Medical Corps, Pennsylvania Reserve Militia, and has been assigned to duty with the third infantry.——Dr. Nathaniel Ross, Wilkes-Barre, has been commissioned captain in the Medical Corps, Pennsylvania Reserve Militia, and assigned to duty with the second infantry.——Dr. John B. Lowman, Johnstown, was elected treasurer of the Medical Society of the State of Pennsylvania, April 30, succeeding Dr. George W. Wagoner, deceased.

Philadelphia

Personal.—Drs. Alice M. Seabrooke and Francis O. Allen addressed the graduates of the training school for nurses of the Children's Hospital, May 9, at the New Century Club.

Under-Graduates Hold Meeting.—At the twelfth annual meeting of the Under-Graduate Medical Association of the University of Pennsylvania, May 1, John H. Gibbon, Lieut.-Col., M. C., U. S. Army, professor of clinical surgery in Jefferson Medical College, delivered an address on "The Progress of Surgery During the War."

Clean-Up Campaign.—The week of May 3-10 was appointed as clean-up week and it was estimated that fully 2,600 extra loads of rubbage and materials of various kinds were carted to the dump during that week. Almost the entire city was divided into sections that the carting might be facilitated and both the director and chief of the bureau of city cleaning feel that this has been the most general and effective clean-up week the city has ever had.

Memorial Services for Health Director of Red Cross.—Memorial services for the late Jane O. Delano, former director of the department of health, American Red Cross, was held at the Academy of Music, May 7. Miss Delano died on April 15 in Base Hospital No. 10, Saveney, France. The entire first floor and part of the second was filled with hospital nurses in uniform. On the stage were men identified with the medical service and one hundred nurses returned from overseas. Dr. Edward Martin, late Colonel, and present M. R. C., state health commissioner, presided at the meeting, and addresses were made by M. M. Riddle, superintendent of the hospital training school at Newton, Mass., Brig.-Gen. William Thayer and John H. Finley, commissioner of public health in the state of New Jersey.

Record of Violent Deaths in 1918.—According to the records of the coroner's office, the year of 1918 had an unusual number of murders, suicides, accidents and accidental shootings. There was a marked decrease in industrial accidents, the coroner stated that the latter have steadily decreased since the passage of the workmen's compensation act. The following table shows the accidents for 1917 and 1918:

	1918	1917
Motor Car	223	161
Railroad	106	93
Elevator	24	16
Street car	111	81
Miscellaneous	589	882

In 1918 there were 123 homicides and 211 suicides. Inquests held during the year totaled 5,083. In October, when the influenza epidemic was at its height, 871 inquests were held, a record for the office.

TEXAS

Bills for Lepers Passed.—Two measures in behalf of the lepers of Texas were passed in the state House of Representatives. One repeals the bill appropriating $25,000 to provide for the erection of a leper colony. The other permits the use of this money to relieve victims of leprosy, the relief to be administered by the state health department.

Panhandle Physicians Meet.—The annual meeting of the Panhandle Medical Society, district No. 2, was held at Amarillo, March 18 and 19, and the following officers were elected: president, Dr. John J. Hannah, Quanah; vice presidents, Drs. James R. Wrather, Amarillo, and Francis M. Wilson, Canyon, and secretary, Dr. James J. Crume, Amarillo.

State Health Board Appointments.—The state board of health at its first quarterly session, April 29, announced the following appointments: assistant health officer, Dr. Oscar Davis, Anderson (reappointed); state registrar of vital statistics, Dr. N. V. Perker, Navasota; bacteriologist, Dr. George M. Graham, Austin (reappointed); director of the bureau of venereal diseases, Dr. Horace C. Hall, Laredo (reappointed); director of the bureau of rural sanitation, Dr. Platt W. Covington, Austin (reappointed), and Dr. Douglas Largen, San Antonio, as director of the state health survey.

Personal. — Dr. Thomas A. King, Vernon, has been appointed a member of the state board of medical examiners. ——The mayor of Dallas has appointed the following physicians as members of the municipal health board: Drs. William J. Calvert, Thomas J. Crowe, Joseph W. Bourland, Samuel M. Freedman, John W. Embree, S. L. Scothorne, J. J. Williams, Groesbeck, and Calvin R. Hannah of Dallas.—— Drs. Major H. Leach and Benjamin E. Howell have been appointed members of the negro welfare board of Dallas. ——Dr. Peter H. Scardino, formerly city health officer of Houston, and at present a medical officer on the Italian front, has declined the position formerly held by him as health officer, and tendered him by the city council to take effect on his return.——Dr. Henry B. Combs, Bastrop, has been elected health officer of Bastrop County.——Dr. Sidney J. Wilson has been placed in charge of the free clinic at Fort Worth.——Dr. Paul Gallagher, El Paso, has been elected associate editor of *Southwest Medicine*.——Dr. George H. Sandifer, Abilene, has been appointed a member of the state board of health.——Dr. James H. Ray, Denton, has been elected health officer of Denton County.

WISCONSIN

Antidrug Act Violator Punished.—Dr. John G. Barnsdale, Superior, convicted in the United States Appellate Court last summer for violation of the federal narcotic act, must serve the term of imprisonment of three years and pay the fine of $6,000 assessed against him at that time, as the Circuit Court of Appeals of Chicago, May 2, made a ruling affirming the decision of the lower court.

Personal.—Dr. Bertha V. Thomson has been appointed health commissioner of Oshkosh, succeeding Dr. James R. Bean, Philadelphia, who recently resigned from that position. ——Dr. Carroll D. Partridge, Milwaukee, assumed his duties as health officer of Wausau, May 1.——Gustavus I. Hogue, Major, M. C., U. S. Army, Milwaukee, has been promoted to Lieut.-Col., M. C., and placed in command of an eye, ear, nose and throat hospital in Paris.——Dr. Jacob M. Furstman has been legally confirmed as health commissioner of LaCrosse.——Dr. Clarence A. Baer, Milwaukee, who has been on duty with the American Red Cross in France, expects to resume practice in Milwaukee this month.

Hospital Items.—A three-story building is to be added to the present structure of St. Mary's Hospital, Sparta. New rooms, a new kitchen, laundry accommodations and a heating plant are to be added, and another elevator will be installed. The improvements will cost approximately $35,000. ——The general contract for the building of the Tri-County Tuberculosis Sanatorium near Salmo, Chequamegon Bay, has been let to an Ashland firm. The building, which is to be erected jointly by Ashland, Bayfield and Iron counties, at a cost of $80,000, will be completed this summer.——A hospital to cost $20,000 will be erected at Hartford by Miss Helen Lohr and her associate, Miss Esther Welton.——The Milwaukee branch of the American Fund for French Wounded is raising $6,000 to endow a bed in the Reconstruction Hospital to be built at Rheims, France, as a memorial to Americans.

Report on Charitable Institutions.—In the report of the conditions of the penal and charitable institutions of the state made by the legislature visiting committee to the governor, the institutions were found, as a whole, overcrowded. In many instances feebleminded were found in institutions for the deaf, blind and orphans, in the reform schools and prisons, because there is no other place to put them. An appalling increase of feebleminded with lack of facilities for their accommodation was noted, and immediate sterilization of feebleminded, male and female, in the state was recommended. The School for Dependent Children at Sparta was severely criticized. The committee reports that there seems to be a complete lack of sympathy between the executive and assistants and more than forty out of the 242 inmates are in such low mentality that they should be transferred from the institution. The Home for the Reformation of Women, near Fond du Lac, which has cost about $250,000, is said to be entirely ineffective and the committee recommends $200,000 for new and suitable buildings. At the Industrial School for Girls there was said to have been 247 inmates, 5 per cent. of whom are subnormal, and 20 per cent. of whom are afflicted with venereal disease.

CANADA

Academy of Medicine, Toronto.—At the annual meeting of the Academy of Medicine, Toronto, May 6, Dr. Edmund E. King was elected president; Dr. Jabez H. Elliott, vice president; Dr. Frederick C. Harrison, honorary secretary, and Dr. J. Herbert McConnell, treasurer. The fellowship of the academy is now 500, of whom 132 served overseas. These are now gradually returning to resume practice in Toronto.

Ontario Board of Health and Salvarsan.—Dr. John W. S. McCullough of the Ontario Board of Health states that the action of the Dominion government in refusing a permit to the provincial board to manufacture the German product is the greatest stumbling block to carrying out the Ontario Venereal Diseases Act effectively. Another application has been made to the federal authorities. Since July 1, 1918, there have been reported to the board the following cases of venereal diseases: syphilis, 853; gonorrhea, 1,586; chancroid, 40.

Personal.—Dr. Frederick J. White, Moncton, N. B., has been appointed local representative in medicine by the Soldier's Civil Reestablishment and Invalided Soldiers Commission of Canada.——Dr. Philip I. Nash, New Brunswick, has been appointed to the pension board as specialist in ear, nose and throat for the province of New Brunswick.——Dr. Joseph N. Roy, Montreal, oculist and aurist to the Hotel Dieu Hospital, has been made Laureate of the Academy of Medicine, Paris, France.——Dr. Alfred Massey, Belleville, Ont., has won distinction in the Belgian Congo, where he was medical officer over a battalion of native troops. He has been awarded the rank of major, and has been decorated with La Croix de Chevalier de l'Ordre Royal de Lion.

LATIN AMERICA

Elections in the Lima Medical Faculty.—Dr. E. Odriozola, chief of the editorial staff of the *Crónica Médica* and professor of clinical medicine, has been elected dean of the Facultad de Medicina, Dr. R. L. Flórez, sub-dean; and Dr. M. A. Velásquez, secretary.

Proposed Congress of the Latin American Medical Press.—The Cuban Medical Press Association has appointed a committee, consisting of Drs. Tamayo, Fernández and López Silvero, to start and foster a movement for a congress of the editorial staffs of the Spanish-American medical journals.

Celebration of Núñez' Fiftieth Anniversary.—The Sociedad de Estudios Clinicos of Havana recently presented Dr. E. Núñez, director of the Mercedes Hospital, with a gold medal as a tribute of esteem on the fiftieth anniversary of his entering on the practice of medicine. The presentation was made at a festival meeting presided over by the Secretario de Sanidad y Beneficencia, the chief of the public health service.

Death of Dr. Noguera of Colombia.—Dr. Oscar Noguera, one of the prominent surgeons of Bogotá, Colombia, S. A., has just died. Dr. Noguera had been educated in Germany, and was considered the pioneer in modern surgery in Colombia, having introduced a number of operations. Because of blindness he was compelled to give up the practice of surgery, acting since that time as director of public health of the District of the Atlantic.

New Journal in Cuba.—There has just appeared the first number of a new medical journal, *Revista Cubana de Oftal-*

mologia, published at Havana. The price of subscription is $6 a year. It is the intention to publish it trimestrially, although the first number covers a period of six months, containing two numbers in one volume, as is often the practice in Latin countries. This journal, as its title indicates, will be devoted exclusively to ophthalmologic subjects. The *Revista* is well printed, is illustrated, and contains 226 pages of reading matter. Its editor is Dr. F. M. Fernández and the *secretario*, Dr. J. M. Penichet.

Scarcity of Arsphenamin in Peru.—The *Reforma Medica* of Lima deplores the scarcity of arsphenamin preparations. A single dose of a French neoarsphenamin costs 10 or 12 soles, and any of the drug with a German trademark costs 40, 50 or even 80 soles. Arsphenamin of English and American makes is still unknown in Peru; and the Japanese product sells for about 30 soles, without much demand for it. The price of arsphenamin before the war was about 5 or 6 soles per dose. The consequence of this scarcity of the drug is the pathogenic rehabilitation of syphilis, the editorial declares, and implores the government to take the necessary steps to relieve this intolerable state of affairs. The sol of Peru is equivalent to a little less than 50 cents.

GENERAL

Æsculapian Society to Meet.—The Æsculapian Society of the Wabash Valley, whose membership includes eastern Illinois and western Indiana, the oldest medical society west of the Allegheny Mountains, will hold its annual meeting at Danville, Ill., May 29.

Railway Surgeons Meet.—The Association of American Railway Chief Surgeons, which met at the Commodore Hotel, New York City, May 5 and 6, elected the following officers for the ensuing year: president, Dr. Clarence W. Hopkins of Chicago; vice president, Dr. Duncan Eve, Nashville, Tenn.; secretary and treasurer, Dr. Louis J. Mitchell, Chicago.

Speech Disorder Experts to Meet.—The National Society for the Study and Prevention of Speech Disorder will hold its summer meeting in Milwaukee, July 4, as one of the affiliated societies of the National Education Association. Any one desiring to receive an advance program should address the secretary, Miss Marguerite Franklin, 110 Bay State Road, Boston.

Southern Railway Physicians Elect Officers.—At the annual meeting of the Association of Surgeons of the Southern Railway, held in New Orleans, April 24, the following officers were elected: president, Dr. Harry T. Inge, Mobile, Ala.; vice presidents, Drs. William H. Armstrong, Rogersville, Tenn.; Daniel W. Scott, McDonough, Ga.; Albert R. Wilson, Greensboro, N. C., and William T. Mathews, Greenwood, Miss., and secretary, Miss Edith Foltz, Washington, D. C. Washington was selected as the next place for the annual meeting.

Bequests and Donations.—The following bequests and donations have recently been announced:

St. Vincent's Hospital, New York City, $25,000; St. Francis' and St. Joseph's hospitals, each, $10,000, and Misericordia Hospital, New York City, $2,000, by the will of John E. Manning.

Infants Hospital, Boston, and Industrial School for Cripples and Deformed Children, Boston, each $10,000; Free Home for Consumptives, Boston, the house of testator, Brookline, together with 3,000 feet of land in memory of his son, Frederick W. Thym; Massachusetts General Hospital, $10,000, to be devoted after the death of his wife for an endowment of a free bed; and the Free Hospital for Women, Brookline; all of the residue, personal and mixed, after the payment of bequests and trust funds, by the will of George William Thym, Brookline.

FOREIGN

First Scandinavian Pediatrics Congress.—The *Ugeskrift f. Læger* announces: "The Første nordiske Kongres for Pædiatri is to convene at Copenhagen Aug. 15 and 16, immediately preceding the nordiske Kongres for intern Medicin." The subjects appointed for discussion are acute digestive disturbances with artificial feeding; the etiology, classification and treatment. The main addresses will be by Bloch of Copenhagen and Johannesson of Christiania. The secretary general is Dr. A. H. Meyer, V Boulevard 51, Copenhagen B.

The Spanish Asylum for Orphans of Physicians.—The Colegio del Principe de Asturias is approaching completion so that the candidates are being selected. It is proposed to give the preference to boys between 5 and 10 and girls from 4 to 11, and there will be accommodations for 100 in the completed portion. The asylum is to be maintained in part by stamps which are to be affixed to all medical certificates and other medical documents. Already stamps to the value of 134,881 pesetas have been taken by the fifty different provinces into which the country is divided, and orders for 39,141 pesetas worth are filed.

Invasion of China by American Brewers.—The threatened invasion of China by American brewers owing to the closing down of their business in America by the President's order has stirred the educational and missionary communities of China, and strong protests have already been forwarded to the American minister in Peking to prevent the country from being soaked with beer. The National Medical Association of China favors this condemnation of the proposed introduction of a new evil into China. The people of China have been fighting the opium and morphin dangers and do not wish to see an alcohol problem crop up just as the old ones are disappearing.

Moral Welfare Work in Shanghai.—The Shanghai Moral Welfare Committee, consisting of representatives of about eleven religious and charitable associations in Shanghai, was formed May 16, 1918, for the purpose of effecting the abolition of every form of commercialized vice in Shanghai. This committee proposes to present resolutions before the ratepayers' meetings to secure (1) deletion from the law of the word "brothel," and (2) cessation of examination of female prostitutes by municipal officers and the issuing of certificates to such examinees. It is sought to prohibit placards in streets and advertisements in newspapers of quack remedies for venereal diseases; to publish health cartoons and simple literature on the dangers of venereal disease and their prevention; to organize free treatment places for sufferers of venereal diseases; to discourage the sale of intoxicants and to establish a vice commission to deal with the matter.

Fight on Typhus.—The International Red Cross Committee at Geneva, Switzerland, acting through the American legation at Berne, has invited the United States to name representatives on a joint international commission to consider means and take measures for preventing the further spread of typhus. The cable brings reports of the alarming spread of spotted or exanthematic typhus in eastern Europe, especially in Poland, Siberia and the Ukraine. The epidemic threatens to extend over central and western Europe. The calling of an international meeting to fight the scourge, as was done in Serbia in 1915, was requested of the International Red Cross Committee by the Austrian Red Cross. The general situation affecting the matter in question is now under consideration at the Cannes conference of specialists, who are engaged in preparing reports for submission to the forthcoming international convention of Red Cross societies at Geneva.

International Scientific Relations.—In 1915 the official *Bulletin* of the French Académie de Médecine reported that the Académie had decided to drop from its list of associate members those German scientists who had signed the "Manifesto signed by the 93" upholding the military authorities in their method of conducting the war, protesting that the spirit of German science and the spirit of militarism are one, not in opposition. The Manifesto was issued as a protest against the statements in English and other papers seeking to excuse the German scientists as not upholding "Prussian militarism." When the Allied armies entered Strasbourg they found copies of a similar Manifesto, dated Oct. 16, 1914, which bore the signatures of 3,000 professors and other scientists throughout the German empire. The wording was identical with the "Manifesto of the 93." It bore the notice that it was issued by the "Kaiser Wilhelm Dank," Flottwellstrasse 3, Berlin, and was certified by Prof. D. Schaefer, Berlin-Steglitz, Friedrichsstrasse 7. In 1915, the Académie had been content to drop merely the associate members, hoping to learn that their corresponding members had published later some protest against the ruthless militarism. But, as the contrary has proved to be the case, the Académie, after study of the subject by a committee, voted, March 18, almost unanimously, to drop the corresponding members in the German countries. Consequently, the official *Bulletin* states that all connection has been severed with the following eight German scientists: Erb and Kossel of Heidelberg; Schmiedeberg of Strasbourg; Filehne and Hirschberg of Berlin; Unna of Hamburg, and Benedikt and Adamkiewicz of Vienna. The Académie also voted unanimously against taking part in international gatherings with German scientists who had signed the Manifesto.

LONDON LETTER

London, April 23, 1919.

Graduate Medical Education in London

An elaborate scheme for graduate medical education has been formed, and it is hoped will receive support from the government. Graduate teaching is required for the following classes: (1) physicians in Great Britain who would like to spend a portion of their holidays in getting up to date in all branches of their work, or who wish to spend a few months in learning all that they can about some particular subject in which they desire to specialize, either completely or in conjunction with general practice; (2) medical officers of the Royal Navy, the Royal Army Medical Corps, the Royal Air Force, and the Indian and Colonial Medical Services, who have to attend postgraduate courses at stated intervals; (3) graduates from British colonies, India and Egypt, including those who have recently qualified, and wish to complete their medical education in England, and some senior men who fall into the same category as the men in Class 1; (4) graduates of allied countries, especially Americans, large numbers of whom have in the past studied in Germany and Austria, in many instances simply because they were unable to obtain equal facilities in England, as well as the French, who have hitherto rarely studied abroad, and the Japanese.

All the existing London undergraduate medical schools have agreed to provide the following postgraduate instruction:

1. *General Courses.*—Each medical school will provide annually two courses of postgraduate teaching, each of a fortnight's duration, or one course of a month's duration, at the discretion of the individual schools, a succession of periods being arranged so that such teaching is obtainable throughout the year. The dates of the courses at each school will vary from year to year, so that more or less convenient periods will fall to different schools in different years. Each school will be asked three months in advance to draw up a program which will give opportunities for study throughout the working day in the subjects included in the courses, and will decide how many students can be admitted to each course.

2. *Special Courses.*—Special courses will be arranged in the schools, in which a graduate may have the opportunity of deeper study in any particular subject. Such courses will usually last for not less than three months, and it may be advisable that different parts of the courses should be carried on at different institutions. The special courses will be as comprehensive as possible. For example, a course in disorders of digestion might include: (*a*) lectures by an anatomist, a physiologist, a pathologist, a radiographer, a physician and a surgeon; (*b*) clinical teaching on cases in the wards and outpatient departments and on other cases collected by the teacher from his wards or outpatient departments during the previous six months; (*c*) practical instruction in the roentgen-ray investigation of disorders of digestion by the radiographer; (*d*) practical instruction in chemical analysis of gastric contents and feces by the clinical chemist; (*e*) practical instruction in bacteriologic and microscopic examinations of feces by the pathologist; (*f*) demonstrations on museum and postmortem specimens by a demonstrator of morbid anatomy or by any other physician interested in the subject; (*g*) demonstrations on the use of the sigmoidoscope; (*h*) opportunities for seeing operations on cases already investigated by the students. After having attended such a special course, a graduate may apply to the teacher for permission to do research work under him or to act as his clinical assistant. Facilities will be afforded for students to attend the ordinary hospital practice of the medical schools.

The existing London postgraduate schools and special hospitals which have given postgraduate instruction in the past will continue to do so in cooperation with the other teaching institutions working with the association. There will be no limit placed on the duration of their courses of instruction, which may continue throughout the year.

[Note.—See also p. 1484, this issue.—Ed.]

Disabled Pensioners

The problem of men disabled by the war is a big one. There are now 600,000 disabled men to whom pensions have been granted, and about 20,000 new awards are being made every week as men are demobilized or discharged from hospital. It is estimated that there will be at least 700,000 temporary pensioners, of whom an unknown number will become entitled to permanent pensions. The government has arranged to take over the orthopedic hospitals from the army and to establish outpatient clinics in surrounding towns and districts under the direction of the surgeons attached to these hospitals; similarly, treatment will be provided in hospitals and outpatient clinics for cases of nervous disease. It is hoped in this way to make a resurvey of patients who will benefit from treatment by orthopedic and nerve specialists and to give a further chance of treatment to those who have, for one reason or another, discontinued it. The number of disabled men who will require industrial training under the government scheme is about 350,000. The men who have lost a limb number 24,000, and those who have received some injury either to a leg or an arm not necessitating amputation, 128,000; it is probable that a large number of these will not be able to carry on the same manual labor as before. The neurasthenics number 36,000, and many of them will require outdoor employment, as would also many of the 60,000 suffering from chest complaints, including tuberculosis. The number of cases of rheumatism is 39,000; some have been cured, but others will require to find indoor work. Of the 54,000 men suffering from heart trouble many may have to change their previous occupation if it involves heavy physical strain. Many of the 10,000 men suffering from deafness will be unfit to go back to their previous employment. The blind who have received training will number 1,435. Of the 350,000 men, some have been cured, but a large number are still under treatment and not yet ready for training; many are capable of resuming their previous occupation, but many more have been attracted by high wages to occupations which may prove to be temporary. At present the ministry of pensions has trained, or has in training, 24,000 men. Arrangements have been made through local war pensions committees, which have 600 schemes, and instruction has been given at technical institutions, agricultural colleges, farms and market gardens. In all the main industries, trade advisory committees have been formed to advise the local committees, but new schemes and a great extension of the training facilities are required.

The Outbreak of Rabies

The occurrence of cases of rabies in the west of England has been reported in a previous letter, after an absence of the disease from this country for more than twenty years. It was stamped out by muzzling dogs in all the affected areas. The disease is supposed to have been introduced by soldiers bringing in dogs from the continent of Europe. The greatest precautions were taken and they were forbidden to do this, but it is supposed that soldiers must have smuggled in dogs to which they had become attached and that some of these dogs were diseased. The number of verified cases of rabies which has occurred in Great Britain in the outbreak is 156, of which two have occurred in the London area. So far, no case of hydrophobia is known. The compulsory muzzling of dogs with a wire cage is in force all over London and in the affected districts of the country. Any dog found at large without a muzzle will be taken to a police station. If the name and address of the owner are on the collar, he will be communicated with, and unless the animal is claimed within seven days it will be destroyed. Dogs suspected of rabies will be destroyed at once. All movement of dogs out of the scheduled areas, except for purposes of quarantine, is forbidden. Provision has been made by the government for the treatment with specific antirabic material supplied by the Pasteur Institute of Paris. The names of all persons reported as having been bitten by dogs suspected of rabies will be sent at once to the health officer.

Longevity of the Limbless

At the opening of a hospital for the limbless in London, Colonel Openshaw of the London Hospital said that a man who had lost one leg was likely to live longer than if he had not lost it, and that a man who had lost two legs would probably live longer still. It was therefore very necessary to make adequate provision for men deprived of arms or legs as the result of the war. These men were likely to live long and to require attention for many years to come. There was a physiologic reason for his statement about longevity. The heart had to carry the blood to the extremities and, other things being equal, would continue to work longer if the legs were taken away. A man who had lost both his legs could be a better swimmer than before his loss.

Compensation for Miners' Phthisis

Since the passing of a compensation act for miners' phthisis by the first Union Parliament of South Africa, 4,000 miners have benefited, and an outlay of $15,000,000 has been made. The victims in the primary stage have received $1,500 and in the secondary stage $3,750. A new bill has just been introduced increasing the $1,500 to $1,750 and substituting for the

$3,750 a payment of from $50 to $75 per month, subject to residence in the Union. Moreover, in the hope of inducing the miner to leave work underground before his working capacity is impaired, the bill proposes to grant a lump sum of $10,000 to men in what is defined as the "anteprimary stage," when there are physical signs of lung trouble short of definite silicosis.

MEXICO LETTER

Mexico City, May 4, 1919.

The Sixth National Medical Congress

There has just been issued the call for this meeting, which will be held at Toluca, April 18-26, 1920, under the presidency of Dr. J. Terrés. At the closing session of the preceding congress, invitations were received from the three cities of Toluca, Monterey and San Luis Potosi, but as the first invitation was received from the authorities of the state of Mexico, its capital, Toluca, was unanimously chosen. The committee organizing the congress, which also made the arrangements for the first congress on typhus fever, has devoted considerable time to its task, and has designated committees in all the states and territories and asked a number of physicians to discuss various subjects.

In addition to physicians, pharmacists, dentists, veterinarians, engineers and lawyers will be entitled to participation in the congress. The different sections will be: (1) anatomy, histology and physiology; (2) internal medicine (including neuropathology and psychiatry, dermatology and syphilography and medical pediatrics); medical therapeutics, pharmacology, pharmacy, and natural history (medical); (3) surgery and surgical therapeutics, including otorhinolaryngology, andrology and surgical pediatrics; (4) ophthalmology; (5) obstetrics and gynecology; (6) hygiene, medical geography, climatology, and sanitary engineering; (7) legal medicine, medical teaching and ethics; (8) military medicine and surgery; (9) dentistry; (10) veterinary science. The papers to be presented at the congress must be written in Spanish, and not consume more than twenty minutes' time, with the exception of original papers, which will be allowed twice as much time. All the papers must be in writing. Among the subjects suggested by the organizing committee are the following: arterial pressure among Mexicans; histology of the blood of the new-born and of pregnant women; the "mal del pinto"; the treatment of syphilis; the therapy of leprosy; the etiology of cancer; the geographical distribution of goiter; the treatment of glaucoma; the frequency of vertex presentation in Mexico; the use of pituitary extracts in obstetrics; gonorrhea in women; criminal abortion and its prevention; venereal prophylaxis; somatological anthropology and various applications of anthropometry; measures against the use of mariahuana (*Cannabis indica*) by soldiers; treatment of penetrating wounds of the abdomen; the treatment of pyorrhea and bovine pyroplasmosis.

The registration fee is five pesos, and members will receive a volume containing the papers presented and the discussions. All the communications about the congress should be addressed to the secretary, Dr. F. Ocaranza, 2/a Calle de S. Juan de Letrán, No. 19, Mexico City.

Mexican Red Cross

This association has received more than $2,800 as the result of a function organized last month by the ladies of the American colony, who did this to show their gratitude to the Mexican people for their generosity in patronizing the benefits held during the war to collect funds for the allied charities.

The Scarcity of Meat

Beef, which a few years ago sold at 25 cents a kilogram (about 11 cents a pound), has been rising in price until now it is $1.40 a kilogram (about 63 cents a pound). This is considered too much for a country like Mexico, which raises its own cattle, and it is believed the rise in price is due to speculations of profiteers.

The School of Medicine

The School of Medicine is planning to hold, May 5, a *Kermesse* for the purpose of obtaining funds toward the erection of a monument to the late Justo Sierra, who was the founder of the National University and secretary of public education under the government of General Diaz.—— Dr. J. Terrés, one of the oldest professors of the School of Medicine and also of the High School, has resigned his positions.

PARIS LETTER

Paris, April 24, 1919.

Military Pensions

The senate has ratified the action taken by the Chambre des Députés modifying the present military pension system. The new pension rate will be fixed by the degree of invalidism or disability as determined by the Disability Board on the basis of a percentage to be expressed in multiples of five, 100 per cent. being allowed for complete disability. In the case of a private soldier who is completely disabled, the annual pension will amount to 2,400 francs. A supplementary allowance is made to those who are badly mutilated and therefore require the services of an attendant. This allowance will amount to one quarter of their pension. Blind soldiers will receive 3,000 francs annually.

A temporary pension is given to all those who are invalided temporarily for a period not to exceed two years, but this allowance may be renewed biennially after reexamination. At the expiration of any pension period, the pension may be increased or diminished or it may stand as it was if the disability is not considered to be a permanent one; or, if it is permanent, a definite pension will be allowed. No further pension will be allowed if the disability has disappeared, or if it does not incapacitate a man to the extent of 10 per cent. of his working powers. Any pensioner whose pension is still on a temporary basis who may become afflicted by a complication or whose infirmity becomes aggravated, may, without waiting for the expiration of the biennium, ask for a revision of his case, which, then, must be made within two months. The status of the temporary pensioner must be put on a permanent basis within four years, either through the conversion of the temporary pension into a permanent pension, or by the complete withdrawal of the pension. The wounded, the sick or the infirm will have the right to ask a civilian physician to assist in making the examination on the outcome of which the pensioner's status depends.

The new pension rates (in francs), with the degree of disability expressed in multiples of twenty, are given in the accompanying table.

THE NEW PENSION SCHEDULE (IN FRANCS).

Rank in French Army	Degree of Disability					
	10%	20%	40%	60%	80%	100%
Adjudant-Chef	260	520	1,040	1,560	2.080	2,600
Adjudant	255	510	1.020	1,530	2,040	2,550
Aspirant	252	504	1,008	1,512	2,016	2.520
Sergent-Major	249	498	996	1,494	1,992	2,490
Sergent	246	492	984	1,476	1,968	2,460
Caporal	243	486	972	1,458	1,944	2.420
Soldat	240	480	960	1,440	1,920	2,400

Compulsory Notification of Tuberculosis

This question continues to occupy the mind of the medical profession and remains the subject of numerous discussions at the meetings of all medical societies. At the session of the Académie de médecine, held March 25, the discussion of Dr. F. Bezançon's report bearing on this subject was begun. Professor H. Vincent declared himself to be an advocate of this measure and stated that tuberculosis is particularly prevalent in France. In 1912 the tuberculosis mortality rate in France was 211 per 100,000 population. In England it was 137, and in Italy and Spain, 149. In 1913, 84,443 deaths from tuberculosis were registered in France. To this figure should be added the greater part of the deaths from chronic bronchitis (15,277), chronic pleurisy, emphysema, etc. Vincent is convinced that compulsory notification is the necessary first step in the fight against tuberculosis. This is also true of diphtheria, cholera and plague, for only by such notification, followed by the required prophylactic measures, can these diseases be controlled effectively. While it is true that prophylaxis must be applied to the whole social body and is inseparably linked with bacteriologic prophylaxis, the latter is, nevertheless, more important, since it is directed toward the prime cause of the disease, the bacterium, and seeks out and renders innocuous the carriers as well. Contagion stalks in the homes of the rich as well as in the meanest hovel, if the infectious agent is not destroyed. In New York City compulsory notification has lessened the number of deaths from tuberculosis by 6,000 per year for the last twenty years, even before it was possible to take proper measures against overcrowding, filth and bad sanitation. The fight against tuberculosis must be directed against the tubercle bacillus, supported by general prophylactic measures. Compulsory notification is fundamental and essential for this. The work can be carried on effectively only by securing the cooperation of all other agencies, the dispensaries, sanatoriums, hospitals and house to house visitation.

Compulsory notification has aroused the opposition of the medical profession in every country in which it has been proposed and instituted; nevertheless, these same medical opponents have invariably become the most ardent advocates of the measure when the excellent results obtained by it have become apparent. Neither in foreign countries nor in the departments of France, where the Rockefeller Commission has instituted a campaign against the tubercle bacillus, nor among the 110,000 soldiers invalided for tuberculosis during the war, has material or moral damage accrued to the tuberculous person from compulsory notification. The notification is made discreetly to a sworn medical officer; hence there has been no publicity. Antituberculosis prophylaxis does not mean periodic disinfection with elaborate apparatus of the rooms occupied by the patient; more simple measures, such as those employed in sanatoriums, suffice. The instruction of the patient can be undertaken by the doctor or by the visiting nurse.

The cost of this antituberculosis campaign, based on compulsory notification, is by no means comparable with the enormous benefits, material, moral and social, that will accrue. The present losses from idleness, disease and death due to tuberculosis vastly outweigh the prospective cost. From 1871 to 1914, during the period of peace, at least 4,000,000 of the French people died from tuberculosis. This disease is a more terrible scourge than war.

Dr. P. Reynier, on the other hand, is opposed to notification. He maintains that compulsory notification has been presented in such a beguiling manner as to arouse illusive hopes. All practicing physicians are, Reynier thinks, opposed to this measure because it threatens to do away with the *right of privileged communication to* which the French people attach so much importance, and which is an honor of the medical profession. Compulsory notification makes a pariah of the tuberculous patient. Then again, compulsory *notification, if introduced at all, should not be limited to* pulmonary tuberculosis, but should include all other forms — open surgical tuberculosis and tuberculosis in general. Another reason for the hostile attitude of physicians is the *possibility of error in* diagnosis. In case of error, will the doctor be held responsible? Reynier believes that the real remedy must be found in prophylactic measures.

The Société de pathologie comparée, however, discussed *this question and* adopted a resolution to the effect that the society is convinced of the need for a campaign against tuberculosis, but that it is not possible to take really effective measures against the disease so long as legislators *allow the* causes to continue in operation. Compulsory notification of tuberculosis cannot be accepted until alcoholism is combated in a more effective way, and so long as the *bouilleurs de cru* (private distillers, distilling the fruits they raise) are allowed to retain their special privileges. When these preliminary reforms have become operative, the society will declare itself on the question of compulsory notification of tuberculosis, for not until then can the fruits of *such discussion* have a salutary effect on the public health.

Congress on Social Hygiene

The Congrés d'hygiène sociale, summoned to consider ways and means for the reconstruction of the regions devastated by the war, held its opening session, April 22, at the Sorbonne, under the presidency of M. Henry Paté, a Paris deputy, who is also president of the Comité national de l'éducation sportive et de l'hyiène sociale. Dr. Doizy, deputy of the département des Ardennes, Medical-Inspector Sieur, Professor Pinard, and others, also took part in the proceedings. M. Paté outlined the work *in* view, stating that it would concern itself not only with the hygiene of the regions devastated by the war, but also with the hygiene of all France, various sections of the congress discussing different phases of the work. Professor Pinard emphasized the importance of the problem of depopulation and outlined the measures to be taken to obviate this very great danger.

Dr. Louis Mourier Receives the American Distinguished Service Medal

General Pershing, commander-in-chief of the American troops in France, acting for the American government, has conferred the Distinguished Service Medal on a number of persons for services rendered during the war; among those so honored being Dr. Louis Mourier, under-secretary of state for the Service de Santé militaire.

Nurse Decorated by the Legion of Honor

Mme. Herminie de Rohan, infirmière-major of the hopital V. G. 81, has been made a chevalier in the Legion of Honor, with the following citation: "For three and a half years she gave her residence for the use of the wounded and founded a surgical hospital which she herself directed. She entered the service as infirmière-major and as infirmière de salle, and without interruption, in spite of poor health, and in a splendid manner, she has always given evidence of the greatest devotion and generosity to all the wounded, wholly forgetful of herself."

Death of Dr. Charles Fernet

Dr. Charles Fernet, professor agrégé on the Paris medical faculty and honorary physician in the hospitals, is dead, aged 82 years. He was made an active member of the Académie de médecine, section on medical pathology, in 1897.

Personal

The following faculty changes have been made in the Ecole de médecine et de pharmacie at Rennes: Dr. Millardet, professor of hygiene and legal medicine, has been made professor of general pathology, internal pathology and legal medicine — a newly created chair.

Dr. Marquis, assistant professor in pathology, clinical surgery and obstetrics, has been made professor of external pathology and clinical professor of genito-urinary diseases. This is also a new chair.

Dr. Bourdinière, assistant professor of pathology and clinical medicine, is now professor of general and applied hygiene, a newly created chair.

Dr. Chevrel, assistant professor of pathology and clinical medicine is now professor of histology, succeeding the late Dr. Perrin de la Touche.

Antituberculosis Measures

The city of Paris and the département of the Seine have interested themselves in carrying out a program of constructing inexpensive homes so as to obviate the danger of contracting and spreading tuberculosis which results from overcrowding. The Office public des habitations à bon marché du département de la Seine, at the suggestion of Mr. Sellier and Mr. Dormoy, has published some maps which show the close relationship existing between overcrowding and increased mortality. This is particularly true of Aubervilliers, Saint-Quen, Gentilly, the nineteenth and twentieth arrondissements — the most populous *districts — where the* number of poorly lodged persons is the greatest and the mortality from tuberculosis the highest. Besides erecting cheap homes, the city of Paris has also purchased *ground in the* suburbs, at Champigny, Suresnes and Chatenay, which will be used for the creation of "garden cities."

Marriages

Joseph Leo McGinley, Lieut., M. C., U. S. Army, Wilkes-Barre, Pa., on duty at Camp Mills, N. Y., to Miss Alberta Crittenden Allen, of New York City, April 17.

Eric Thorston Williams Boquist, Asst. Surg., Lieut., U. S. Navy, Minneapolis, to *Miss Elizabeth* Bacon of New York City, April 30.

Karl Dean Figley, Capt. M. C., U. S. Army, Toledo, Ohio, to Miss Margaret Patterson Morgan, of Bloomfield, N. J., April 23.

William Lordan Keller, Colonel, M. C., U. S. Army, Hot Springs, Ark., to Miss Sara Irvine Greenway, at Hot Springs, April 23.

Frank A. Will, Capt., M. C., U. S. Army, Des Moines, to Mrs. Ethel Israel Will, in Kansas City, Mo., April. 29.

James Bumgardner Murphy, Major, M. C., U. S. Army, New York City, to Miss Ray Slater, of Boston, April 26.

Charles Simon Raadquist, Hibbing, Minn., to Miss Pauline Swanson, of Warren, Minn., April 23.

Omar Oakley Hall, Milford, Ill., to Mrs. Flore E. Flutro, of Paxton, Ill., at Watseka, Ill., April 22.

Fred C. James, Gadsden, Tenn., to Miss Mary Humphrey of Fruitvale, Tenn., April 23.

Jennings Sipe Lincoln, to Miss Violette H. *Fryer, both* of Baltimore, April 29.

Deaths

Nathanial Garland Keirle, Baltimore; University of Maryland, Baltimore, 1858; aged 85; a member of the Medical and Chirurgical Faculty of Maryland; since 1897 director of the Pasteur Institute of Baltimore; physician in charge of the Dispensary of the College of Physicians and Surgeons for twelve years; president of Clinical Society of Maryland from 1887 to 1888; demonstrator and professor of pathology and medical jurisprudence and later emeritus professor in these branches in the College of Physicians and Surgeons; medical examiner (coroner) for Baltimore City since 1887; died at his home, May 2.

Andrew Jackson Detwiler ⊕ Capt., M. C., U. S. Army, Hannibal, Mo.; University of Michigan, Ann Arbor, 1900; aged 45; who had been on duty at Fort Riley, Kan., and was honorably discharged from the Army, December 7, 1918; state sanitary chemist and bacteriologist of Missouri, from 1902 to 1906; died at the home of his brother in Columbia, Mo., April 22, from the effects of a gunshot wound, believed to have been self-inflicted with suicidal intent, while despondent over ill health.

Henry Edgar Bunch ⊕ Major, M. C., U. S. Army, Charleston, S. C.; Medical College of Georgia, Augusta, 1912; aged 29; who had served for two years in France with the British Army; and later rejoined the United States Forces in the Chateau Thierry and Argonne offensives; who had returned home and was awaiting demobilization in Camp Upton, sustained a fracture of the skull in an automobile accident, April 25, and died in the Camp Merritt Hospital, April 27.

Zachariah Turner Sowers ⊕ Washington, D. C.; Columbian University, Washington, D. C., 1870; Bellevue Hospital Medical College, 1871; aged 72; a veteran of the Civil War; founder and for thirty-two years president of the Washington Foundling Hospital; chairman of the board of Legislation of the District of Columbia Medical Society; a member of the visiting staff of the Garfield and Providence hospitals; died at his home, April 23.

William Frederick Hake ⊕ Grand Rapids, Mich.; University of Michigan, Ann Arbor, 1882; aged 57; a member of the staff of the Union Benevolent Association and Butterworth hospitals, for thirty years physician to St. Johns Orphanage, a specialist in diseases of children; for eleven years major and surgeon of the Second Infantry, Michigan N. G.; died at his home, April 26, from pernicious anemia.

Joseph Merzbach ⊕ Brooklyn; Long Island College Hospital, Brooklyn, 1883; aged 62; a specialist on internal medicine; instructor in gastro-enterology in the Brooklyn Post-Graduate School; attending physician to the Jewish Hospital, and chief gastro-enterologist to the Jewish Dispensary; consulting physician to the Brooklyn Hebrew Orphan Asylum; died at his home, April 28, from heart disease.

Richard Carney, Windsor, Ont.; University of Toronto, Ont., 1869; Bellevue Hospital Medical College, 1869; aged 76; medical health officer of Windsor in 1898; city physician since 1893; vice-president of the staff of the Hotel Dieu; formerly surgeon of the Twenty-first Essex Fusiliers; consulting physician to the Grand Trunk System; died at his home, April 26, from cerebral hemorrhage.

Stephen J. Young, Terre Haute, Ind.; Medical College of Ohio, Cincinnati, 1851; aged 90; major, assistant surgeon of the 48th Illinois Volunteer Infantry, and surgeon of the 79th Illinois Volunteer Infantry during the Civil War; a member of the staff of the Union Hospital, Terre Haute, for 25 years president of the Terre Haute Savings Bank; died at his home, April 26.

Willy Carl Rudolph Voight, Ann Arbor, Mich.; University of Michigan, Homeopathic Medical School, Ann Arbor, 1918; aged 36; instructor in experimental pathology in his alma mater; died April 28, from septicemia, due to an infected wound of the finger received while performing a necropsy, eight days before.

Samuel Alton Johnson ⊕ Topeka, Kan.; Kansas Medical College, Topeka, 1897; aged 59; demonstrator of anatomy and later professor of electrotherapeutics in his alma mater; a specialist in dermatology; a member of the staff of Christ Hospital, Topeka; died at his home, April 25, from influenza.

William Lee Campbell ⊕ Kansas City, Mo.; Kansas City, Mo., Medical College, 1897; aged 63; an authority on the early history of Kansas City and the Missouri Valley, and a member of the State Historical Society; died in the Willcrest Hospital, Kansas City, April 24, from nephritis.

James Albert Nowlen ⊕ Morrison, Ill.; Rush Medical College, 1875; New York University, New York City, 1883; aged 66; local surgeon of the Chicago and Northwestern Railway; county physician of Whiteside County since 1887; died at his home, February 12.

Charles S. Dwyer, Troy, Pa.; Bennett Medical College, Chicago, 1888; aged 62; while walking from Columbia Cross Roads, to Springfield, April 15, was seized with a cerebral hemorrhage, and died at Columbia Cross Roads, a few hours later.

Linus Ira Aldrich, Black Earth, Wis.; University of Iowa, Iowa City, 1888; aged 51; formerly physician of Cerro Gordo County, Iowa; a member of the State Medical Society of Wisconsin; died at his home, April 30, from heart disease.

William C. Baird, Bogard, Mo.; Rush Medical College, 1865; aged 79; a member of the Missouri State Medical Association; was thrown from an automobile, April 23, and died at his home from his injuries, the next day.

Clayton Keith, Louisiana, Mo.; Washington University, St. Louis, 1872; aged 72; secretary of the St. Louis Medical Society in 1874, and city health officer of Louisiana from 1876 to 1891; died in St. Louis, April 22.

James Saunders, Orange, Tex.; University of Michigan, Ann Arbor, 1864; aged 62; local surgeon of the Southern Pacific System; formerly acting assistant surgeon U. S. Army; died in Beaumont, Tex., April 27.

Arthur Hall Drane ⊕ Asst. Surg., Lieut., U. S. Navy, Buena Vista, Ga.; Medical College of Georgia, Augusta, 1915; aged 25; died in the City Hospital, Columbus, Ga., April 1, from tubercular peritonitis.

Gustavus Bartlett Morey, Manchester, N. H.; University of Vermont, Burlington, 1878; aged 79; a member of the New Hampshire Medical Society; died at the home of his daughter in Lawrence, Mass., April 29.

Walter Tyler Smith, Sheridan, Ore.; Willamette University, Salem, Ore., 1881; Jefferson Medical College, 1883; aged 50; a member of the Oregon State Medical Association; died at his home, April 19.

Sayer Hasbrouck, Hamilton, Bermuda, formerly of Providence, R. I.; Boston University, 1882; aged 58; a specialist on diseases of the eye, ear, nose and throat; died at his home in Hamilton, March 5.

Edward William Dean, Pittsburgh; Hahnemann Medical College, Philadelphia, 1875; aged 69; a specialist in diseases of the eye, ear, nose and throat; died at his home, April 27, from pneumonia.

William Vernon Kay, Anderson, S. C.; Medical College of Virginia, Richmond, 1916; aged 26; Lieutenant, M. C. N. G. of S. C.; died in General Hospital No. 19, Azalea, N. C., April 10.

Frederick Darwin Burton, Cleveland; Western Reserve University, Cleveland, 1879; Bellevue Hospital Medical College, 1883; aged 53; died at his home in East Cleveland, April 26.

Edward N. Pfohl ⊕ Buffalo, N. Y.; Niagara University, Buffalo, N. Y., 1888; aged 53; a member of the Buffalo Orpheus for more than twenty years; died at his home, April 15.

William Henry Seibert ⊕ Steelton, Pa.; University of Pennsylvania, Philadelphia, 1874; aged 59; a director of several banks; died at his home, April 28, from pneumonia.

Worthy A. Womble, San Antonio, Tex.; University of Tennessee, Nashville, 1891; aged 50; an advertising specialist; died in a hospital in San Antonio, April 24.

Charles E. Nusbaum ⊕ Bremen, Ind.; Northwestern University Medical School, Chicago, 1893; aged 51; died at his home, April 23, from cerebral hemorrhage.

Shepard Voorhees ⊕ Newton, N. J.; University of Pennsylvania, Philadelpha, 1888; aged 59; died April 27, from peritonitis following appendicitis.

Thomas James Nelson, Los Angeles, Cooper Medical College, San Francisco, 1903; aged 40; died in Los Angeles, April 18.

Edward Charles Bubert, Baltimore; College of Physicians and Surgeons, Baltimore, 1893; aged 52; died at his home, April 11.

Jerome Charles Street, Cohasset, Mass.; Harvard Medical School, 1853; aged 91; died at his home, March 26.

⊕ Indicates "Fellow" of the American Medical Association.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

TYREE'S ANTISEPTIC POWDER AGAIN

The "Ethical and Commercial Requirements" of the Drug Business

"I am fond of the retail drug business and follow it every day of my life. I know and observe to the fullest extent its ethical and commercial requirements." This from a circular letter recently received by physicians, and signed J. S. Tyree, who asks that he be forgiven for *writing to you personally*, but there are several reasons why he thinks the circumstances warrant it. All of which is preliminary to calling attention to an enclosure, which accompanies the circular letter, and is described as a "short memorandum" submitted for "*your consideration*."

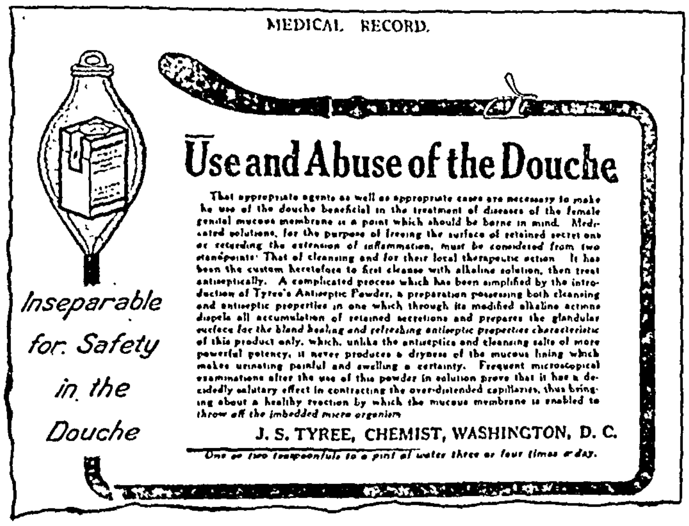
The "memorandum" is a four-page leaflet of which three pages are devoted to "Tyree's Antiseptic Powder." One of these three pages is a reproduction of a letter on the stationery of the Surgeon-General's Office of the War Department, and signed "W. M. Gray, M.D., Microscopist Army Medical Museum; Pathologist to Providence Hospital." The letter describes a series of "bacteriological and comparative tests" made by Dr. Gray with Tyree's Antiseptic Powder. The entire second page of the circular is given over to the results of these bacteriologic tests which compare various strengths of Tyree's Antiseptic Powder with "mercuric bichlorid," carbolic acid and formaldehyde.

The physicians who received this advertising material in April, 1919, might easily overlook the fact that Dr. Gray has been dead several years, that the letter which is reproduced is dated Jan. 3, 1890, and that the bacteriologic tests were made in 1889—thirty years ago!

The Council on Pharmacy and Chemistry in 1906[1] published the results of an analysis of Tyree's Antiseptic Powder which showed that although the stuff was advertised as a mixture of borax and alum, it was in fact essentially a mixture of zinc sulphate and boric acid. The publication of the Council's report in 1906, showing the falsity of the formula, brought out the admission that the composition had recently been changed. Certain it is, however, that for at least a decade past, the Tyree product has been a zinc sulphate-boric acid preparation. Yet, according to the manufacturer's own statement, Tyree's Antiseptic Powder in 1889, when Dr. Gray made his bacteriologic tests, was an entirely different substance from the present mixture.

Here then we have a manufacturer publishing in 1919, *in behalf* of a certain product, tests that were made in 1889 with a product of *different composition*, although of the same name! Is this observing "to the fullest extent" the "ethical and commercial requirements" of the "retail drug business"?

There is no scientific excuse for such a mixture as Tyree's Antiseptic Powder. If, however, physicians feel that they must use an *irrational conglomeration* such as this, why not prescribe Pulvis Antisepticus, N. F.? Like the Tyree product, this, too, is essentially a mixture of zinc sulphate and boric acid, *with minute* amounts of phenol, eucalyptol, menthol and thymol, to say nothing of a dash of salicylic acid. This official article has at least the virtue of constancy of strength, *composition* and purity assured under the federal Food and Drugs Act.



MEDICAL RECORD.

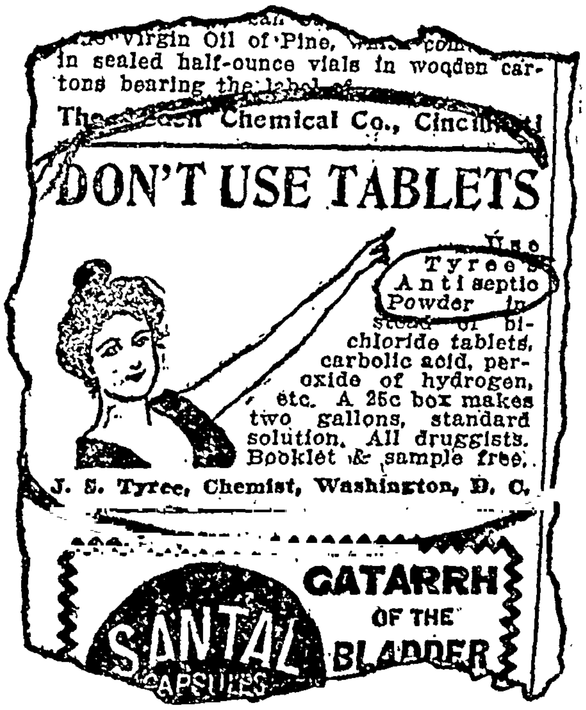
Use and Abuse of the Douche

That appropriate agents as well as appropriate cases are necessary to make he use of the douche beneficial in the treatment of diseases of the female genital mucous membrane is a point which should be borne in mind. Medicated solutions, for the purpose of freeing the surface of retained secretions or retarding the extension of inflammation, must be considered from two standpoints: That of cleansing and for their local therapeutic action. It has been the custom heretofore to first cleanse with alkaline solution, then treat antiseptically. A complicated process which has been simplified by the introduction of Tyree's Antiseptic Powder, a preparation possessing both cleansing and antiseptic properties in one which through its modified alkaline actions dispels all accumulation of retained secretions and prepares the glandular surface for the bland healing and refreshing antiseptic properties characteristic of this product only, which, unlike the antiseptics and cleansing salts of more powerful potency, it never produces a dryness of the mucous lining which makes urinating painful and swelling a certainty. Frequent microscopical examinations after the use of this powder in solution prove that it has a decidedly salutary effect in contracting the over-distended capillaries, thus bringing about a healthy reaction by which the mucous membrane is enabled to throw off the imbedded micro organism

J. S. TYREE, CHEMIST, WASHINGTON, D. C.

One or two teaspoonfuls to a pint of water three or four times a day.

Inseparable for Safety in the Douche



"Virgin Oil of Pine, ... in sealed half-ounce vials in wooden cartons bearing the label of The ... Chemical Co., Cinci...

DON'T USE TABLETS

Use Tyree's Antiseptic Powder instead of bichloride tablets, carbolic acid, peroxide of hydrogen, etc. A 25c box makes two gallons, standard solution. All druggists. Booklet & sample free.

J. S. Tyree, Chemist, Washington, D. C.

CATARRH
OF THE
BLADDER
SANTAL
CAPSULES

Examples of Tyree's Antiseptic Powder advertising. On the left is a greatly reduced facsimile of a half-page advertisement appearing in the *Medical Record* in May, 1919; here the product is an "ethical proprietary." On the right is a reduced facsimile of one of the older newspaper "patent medicine" advertisements.

Correspondence

SERVICE TO SUPPLY INSTITUTIONS WITH TEACHERS AND RESEARCH WORKERS

To the Editor:—The Federation of American Societies for Experimental Biology, comprising the sciences of physiology, biological chemistry, pharmacology and experimental pathology, is now organizing an information service to serve as a medium of communication between persons seeking positions for teaching or research and institutions that wish to fill vacancies in these sciences. Persons, whether members of the federation or not, and institutions desiring to avail themselves of the service may communicate with Prof. Edgar D. Brown, secretary of the executive committee of the federation, University of Minnesota, Minneapolis, and such information as is available will be supplied without cost to the applicant. Applicants are requested to supply the service with ten copies of their application, which should cover the following points:

1. For the person seeking a position: age; college and university training; degrees received; academic or other positions held; list of scientific papers published; membership in scientific societies; position and salary desired; copies of letters of recommendation; names and addresses of per-

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[1] At this time Tyree's Antiseptic Powder was an "ethical proprietary"—heaven save the mark!—and advertised only to physicians. Later, as The Journal has shown, it entered the "patent medicine" field as "ideal for douche" and the "best preventative known." The articles on this nostrum are reprinted in the ninth edition of "The Propaganda for Reform."

sons who can supply further information regarding the applicant; and any other information that the applicant desires to submit.

2. For the institution desiring to fill a vacancy: title of vacant position; date to be filled; requirements as to teaching or other routine work and research; salary to be paid; prospect of tenure of office and advancement; and any other information that the institution desires to submit.

The service does not undertake to recommend or to pass judgment on applicants. It aims merely to serve as a clearing-house for such information as the foregoing and to bring into touch with one another candidates for positions and vacancies to be filled.

E. D. BROWN, Secretary.

University of Minnesota, Minneapolis.

THE PREHISTORY OF THE CADUCEUS

To the Editor:—In the discussion of the caduceus as a medical emblem (THE JOURNAL, April 26, p. 1243), your commentator states that "whoever recommended its use as a medical emblem in this country has either been conducted by Mercury, his titular deity, to join the souls of the dead in the world below, or is keeping unusually quiet." In regard to this pronouncement, I have made inquiry of Col. John Van R. Hoff, M. C., U. S. Army (ret.), until recently editor of the *Military Surgeon,* and largely responsible for the introduction of the caduceus as part of the insignia on the medical officer's uniform, and have learned from him that it was introduced in 1902 as a badge of neutrality, appropriate to the medical officer as a noncombatant. This point, emphasized in Colonel McCulloch's article in the *Military Surgeon,* is one which your correspondent has overlooked, namely, that "merchants on their trading expeditions, the success of which depended on peaceful negotiations, naturally carried their emblem, the wand of Mercury, and hence it became generally established as the badge of the nonfighting man." In itself, this was better symbolism than the Maltese cross with scalloped edges which appeared on the uniforms of our medical officers prior to 1902. The Romans had a special functionary, the *caduceator,* who was a sort of peace commissioner. Long before Churchill, the London medical publisher, had employed it (1844), the caduceus had been used on the title pages of books published by the famous medical printer Frobenius (1460-1527). It was, in fact, his personal device. As the caduceus took its place in medical heraldry about this time (crest of Sir William Butts), there must have been excellent reasons for using it as a medical symbol, known to the authorities of the period even if not yet discovered. But the caduceus as a mythological symbol goes much farther back than the culture of Hellas, as has been shown in Frothingham's important investigations (*Am. J. Archaeol.,* 1916), of which I propose to give an account in the *Military Surgeon* for June, 1919. If any one will examine the Babylonian caduceus (on a vase in the Louvre) in W. H. Ward's "Seal Cylinders of Western Asia" (1910, p. 129), he will see the starting point of Frothingham's investigation, which goes back to 3500-4000 B. C. For a number of reasons, principally as typifying the mysterious and changeable aspects of life itself, the serpent was always the symbol of medicine in antiquity. The Babylonian caduceus, which also occurs in ancient Hittite remains, stands for an actual serpent god, Ningishzida, who as the special messenger of Ishtar was the awakener of life in the springtime and the Mesopotamian prototype of the Greek Hermes. To the *Freudianer,* both snake and caduceus are libido symbols, i. e., in Jung's definition of the term, symbols of potential energy. To primitive man, the snake undoubtedly seemed the outward and visible sign of those potential energies which are summed up in the phrase, "making medicine." In other words, as Rivers has so admirably shown in his Fitzpatrick Lectures (*Lancet,* 1916), medicine, in prehistoric and primitive civilizations, was and is only one phase of a set of magic, mystic and ritualistic processes which express naught else than the savage's groping and grasping for power. Not to apprehend this is to overlook one of the fundamental postulates of medical folklore. In considering Greek mythology and medicine, it is well to remember that each divinity of the Olympian Pantheon had both a celestial and an infernal (chthonian) aspect, and so could promote health or inflict disease at will. Thus, in Arcadia, Lemnos and Samothrace, Hermes, an ithyphallic deity, was worshipped as the god of fertility in crops, men and cattle (the very essence of "making medicine") and so had undoubted medical functions, if we mean by "medicine" here the power of the gods to inflict and abort disease, which summarizes pre-Hippocratic pathology. It is worth while to note that practically all that we know of Greek medicine in the pre-Hippocratic period has been investigated and developed, not by physicians or medical historians, but by experts in archeology and philology. These researches are little known to the medical profession, and are of comparatively recent date.

The following problems seem worthy of investigation by medical historians:

1. How did the caduceus come to be introduced as a medical symbol (Johann Froben, Sir William Butts) in the early sixteenth century?

2. How did the English medical publisher Churchill come to use it about 1844?

3. How did it come to be employed on the chevrons of hospital stewards of the U. S. Army in 1856?

4. How did the well known and current French periodical of military medicine come to be called *Le Caducée* in 1901?

F. H. GARRISON, M.D., Washington, D. C.
Lieutenant-Colonel, U. S. Army.

TREATMENT OF MALARIA

To the Editor:—Kindly allow me to direct your attention to a point in an editorial on malaria containing a statement which might lead to many failures in the treatment. In THE JOURNAL for Feb. 22, 1919, the paragraph beginning on the ninth line, page 572, is as follows:

> When quinin is given continuously for three days, as just suggested, it should be stopped for about a week and then repeated.

The foregoing should read:

> When quinin is given continuously for three days, as just suggested, it should be stopped for six days and then repeated.

It has been found that after the seventh day of interruption of the use of quinin, spore-bearing plasmodia were sometimes present in cases in which quinin had been given every two hours night and day for two or three full days; this shows that some of the spores which were latent have completed their full cycle, and are again ready to produce spores at the end of this time; consequently, in these cases malaria will not be cured, because some spores of this crop may again become latent and produce further spore-bearing plasmodia later, while if the quinin is given before they have reached the spore-bearing period, namely, before the eighth day, this does not occur. This fact we have demonstrated in many hundreds of cases. For this reason the time of interruption should be definitely stated as six days instead of about one week.

A. J. OCHSNER, M.D., Chicago.

HEALTH INSURANCE

To the Editor:—In THE JOURNAL, May 10, under "Medical News," New York, is an item, "Reconstruction Committee Favors Health Insurance." This committee is a political body appointed by Governor Smith who is the first governor of New York to advocate health insurance from the executive mansion. This reconstruction committee made up its findings after hearing leading "civic workers and insurance authorities." No mention, however, is made in this issue of THE JOURNAL of the fact that the Medical Society of the State of New York, a much more competent body, instructed its delegates to the American Medical Association Meeting in 1919, to oppose in every way the project for compulsory health insurance.

JOHN P. DAVIN, M.D., New York.

Queries and Minor Notes

Anonymous Communications and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

DILUTIONS OF ALCOHOL—CALORY VALUES OF SUGARS

To the Editor:—1. Andrews in his book on "Typhoid Fever" states that in case of collapse whisky should be given, one-half ounce every hour. As we cannot obtain whisky, we shall have to substitute grain alcohol. How much alcohol should be used to equal one-half ounce of whisky? 2. What is meant by whisky 100 per cent. proof? 3. What is meant by alcohol 50 per cent. by volume, or by wine containing 15 per cent. alcohol? 4. How many calories are there in a teaspoonful of milk sugar; how many in a teaspoonful of granulated sugar?

Joseph Hatton, M.D., Sarasota, Fla.

Answer.—1. Two fluidrams of alcohol, U. S. P., diluted with an equal volume of water will be the essential equivalent of one-half fluid ounce of whisky. 2. One hundred per cent. proof means equal volumes of absolute alcohol and water, i. e., 50 per cent. alcohol. When a liquor is 100 per cent. proof, it will burn. 3. Fifty per cent. alcohol by volume means that the solution is composed of equal volumes of alcohol and water. As alcohol weighs less than an equal volume of water, the percentage of alcohol by volume is numerically greater than the percentage by weight. When wine contains 15 per cent. alcohol, it is composed approximately of one volume of alcohol plus five volumes of water (which, in turn, contains some solid substances in solution, and flavors). 4. Granulated sugar yields 1,860 calories per pound: a teaspoonful, approximately from 15 to 20 calories; milk sugar about the same.

FORMULA FOR "PEPTENZYME"

To the Editor:—Will you inform me whether "Peptenzyme" has been passed on by the Council on Pharmacy and Chemistry of the American Medical Association and accepted for use by our members? If not, will you give me the formula?

X. Y. Z., Overbrook, Pa.

Answer.—Peptenzyme was reported on by the Council on Pharmacy and Chemistry along with a number of other products of Reed and Carnrick (The Journal A. M. A., Oct. 5, 1907, pp. 1198-1203). The report, "Reed and Carnrick's Methods," announced that none of the products examined were eligible for New and Nonofficial Remedies. ;The following is an abstract of the report concerning Peptenzyme:

> Pepenzyme elixir and powder are said to contain "the enzymes and ferments of all the glands which bear any relation to digestion;" therefore, the peptic glands, pancreas, salivary glands, spleen and intestinal glands. The preparations are said to be "not chemical extracts, but pure physiologic products." Apparently Peptenzyme powder consists of the glands, dried and powdered, while the elixir is an extract. It is stated that these preparations digest proteids, starch and fat, and in addition stimulate and nourish the digestive glands, and that the ferments in these preparations do not interfere with or digest one another. Examination by the Council showed that these preparations were practically devoid of any power to digest proteids or fat when tested by the U. S. P. method. The claim that the product contained ferments which would not show this activity in the test tube, but become active in the alimentary canal, is contrary to known facts and could not be substantiated by the manufacturer. The claims made for Peptenzyme powder and elixir were held to be unwarranted.

In view of the Council's report and the growing appreciation of the medical profession that mixtures of ferments are absurd, it is to be hoped that Peptenzyme has not been "accepted for use by our members."

BLOTTER INDICATING HUMIDITY

To the Editor:—I have an advertisement blotter that changes color with the changes of the weather. It is surprisingly accurate. In fair weather it is blue; in changeable weather, violet; and when it rains, pink. What chemical produces this effect?

Alfred Hultner, M.D., Belle Plaine, Kan.

Answer.—The blotter is probably impregnated with a solution of cobalt chlorid or cobalt sulphate. Cobalt salts are blue when anhydrous and pink when they contain water of crystallization or when they are dissolved in water.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Arizona: Phoenix, July 1. Sec., Dr. Allen H. Williams, 219 Goodrich Bldg., Phoenix.

California: San Francisco, June 23-26. Sec., Dr. Charles B. Pinkham, 904 Forum Bldg., Sacramento.

Colorado: Denver, July 2. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.

Delaware: Wilmington, June 17-19. Sec., Dr. H. W. Briggs, 1026 Jackson St., Wilmington.

Florida: Jacksonville, June 16-17. Sec., Dr. W. M. Rowlett, Citizens Bank Bldg., Tampa.

Florida: Eclectic Board, Jacksonville, June 9-10. Sec., Dr. G. A. Munch, 1306 Franklin St., Tampa.

Georgia: Atlanta and Augusta, June 5-6. Sec., Dr. C. T. Nolan, Marietta.

Illinois: Chicago, June 16-19. Supt. of Registration, Mr. F. C. Dodds, Springfield, Ill.

Iowa: Iowa City, June 12-14. Sec., Dr. Clifford H. Sumner, Capitol Bldg., Des Moines.

Kansas: Topeka, June 17. Sec., Dr. H. A. Dykes, Lebanon.

Kentucky: Louisville, July 1-3. Sec., Dr. J. N. McCormack, Bowling Green.

Louisiana: New Orleans, July 1-3. Sec., Dr. E. W. Mahler, 141 Elk Place, New Orleans.

Maine: Augusta, July 1-2. Sec., Dr. Frank W. Searle, 776 Congress St., Portland.

Michigan: Ann Arbor, June 10-12. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

Minnesota: Minneapolis, June 3-6. Sec., Dr. T. S. McDavitt, 741 Lowry Bldg., St. Paul.

Mississippi: Jackson, June 24-25. Sec., Dr. W. S. Leathers, University.

Missouri: St. Louis, June 9-11. Sec., Dr. George H. Jones, State House, Jefferson City.

National Board of Medical Examiners: Philadelphia, June 27. Sec., Dr. J. S. Rodman, 1310 Medical Arts Bldg., Philadelphia.

Nebraska: Lincoln, June 30-July 2. Sec., Dr. H. J. Lehnhoff, 314 First National Bank, Lincoln.

New Jersey: Trenton, June 17-18. Sec., Dr. Alex. MacAlister, 438 E. State St., Trenton.

New York: Albany, Buffalo, New York and Syracuse, May 20-23. Mr. George M. Wiley, director, Exam. and Inspections Div., State Edu. Bldg., Albany.

North Carolina: Raleigh, June 23. Sec., Dr. H. A. Royster, 423 Fayetteville St., Raleigh.

North Dakota: Grand Forks, July 1-4. Sec., Dr. G. M. Williamson, 860 Belmont Ave., Grand Forks.

Ohio: Columbus, June 3-6. Sec., Dr. H. M. Platter, State House, Columbus.

Oregon: Portland, July 1-3. Sec., Dr. Frank W. Wood, 559 Morgan Bldg., Portland.

South Carolina: Columbia, June 10. Sec., Dr. A. Earle Boozer, 1806 Hampton St., Columbia.

Tennessee: Knoxville, Memphis and Nashville, June 13-14. Sec., Dr. A. B. De Loach, Exchange Bldg., Memphis.

Texas: Austin, June 24-26. Sec., Dr. M. F. Bettencourt, Mart.

Vermont: Burlington, June 26-28. Sec., Dr. W. Scott Nay, Underhill.

Virginia: Richmond, June 17-20. Sec., Dr. J. W. Preston, 215 S. Jefferson St., Roanoke.

Washington: Seattle, July 1-3. Sec., Dr. C. N. Suttner, 415 Old National Bank Bldg., Spokane.

Wisconsin: Milwaukee, June 24-26. Sec., Dr. J. M. Dodd, 220 E. 2nd. St., Ashland.

GRADUATE MEDICAL EDUCATION IN LONDON

A scheme for the improvement of postgraduate medical education in London was approved recently at a meeting of representatives of the various postgraduate medical schools and special hospitals. This scheme, as published in the current number of the *British Medical Journal*, is reproduced herewith. It may furnish suggestions of value in the much needed organization of graduate medical education in the large cities in this country.

A SCHEME FOR POSTGRADUATE MEDICAL EDUCATION APPROVED BY THE LONDON MEDICAL SCHOOLS

I. INTRODUCTION

A. A postgraduate association is required in order to meet the large demand for teaching from the following classes of medical graduates:

1. General practitioners in Great Britain who would like to spend a portion of their holidays in getting up to date in all branches of their work, or who wish to spend a few months in learning all that they can about some particular subject in which they desire to specialize, either completely or in conjunction with general practice.

2. Medical officers of the Royal Navy, the Royal Army Medical Corps, the Royal Air Force, and the Indian and Colonial Medical Services, who have to attend postgraduate courses at stated intervals.

3. Graduates from British colonies, India, and Egypt, including those who have recently qualified and wish to complete their medical education in England, and some senior men who fall into the same category as the men in Class I, but who are prepared to devote a longer time to the purpose than English practitioners.

4. Graduates of allied countries, especially Americans, large numbers of whom have in the past studied in Germany and Austria, in many instances simply because they were unable to obtain equal facilities in England, as well as the French, who have hitherto rarely studied abroad, and the Japanese.

B. Hitherto postgraduate teaching in Great Britain has not been encouraged in the medical schools, because the majority have considered that their first duty was to teach their own undergraduate students, and have therefore given very limited facilities to graduates.

C. It should now be recognized that, although the teaching of undergraduate students must not be allowed to suffer, the claims of graduates should also be considered, in order to promote the efficiency of the medical profession throughout the British Empire.

D. The cooperation of America and France should be secured. This could best be done through the recently organized American Postgraduate Union and the Committee of the Société Médicale des Hôpitaux de Paris on "Medical Education in the Hospitals for Foreigners."

II. SCHEME FOR GENERAL AND SPECIAL POST-GRADUATE COURSES

(a) *In the Existing London Undergraduate Medical Schools*

All of these schools have agreed to provide the following postgraduate instruction:

1. *General Courses.*—Each medical school will provide annually two courses of postgraduate teaching each of a fortnight's duration or one course of a month's duration at the discretion of the individual schools, a succession of periods being arranged so that such teaching is obtainable throughout the year. The dates of the courses at each school will vary from year to year, so that more or less convenient periods will fall to different schools in different years. The rota should be drawn up in such a way that each school may know the dates for its courses for the next three years.

Each school, after inquiring from its teachers what instruction or courses they are prepared to give, will be asked three months in advance to draw up a programme which will give opportunities for study throughout the working day in the subjects included in the courses, and will decide how many students can be admitted to each course.

2. *Special Courses.*—Special courses will be arranged in the schools where a graduate may have the opportunity of deeper study in any particular subject. Such courses will usually last for not less than three months, and it may be advisable that different parts of the courses should be carried on at different institutions. The special courses should be as comprehensive as possible. For example, a course in "disorders of digestion" might include:

(1) Lectures by an anatomist, a physiologist, pathologist, radiographer, physician and surgeon.
(2) Clinical teaching on cases in the wards and out-patient departments and on other cases collected by the teacher from his wards or out-patient departments during the previous six months.
(3) Practical instruction in the x-ray investigation of disorders of digestion by the radiographer.
(4) Practical instruction in chemical analysis of gastric contents and feces by the clinical chemist.
(5) Practical instruction in bacteriological and microscopical examinations of feces by the pathologist.
(6) Demonstrations on museum and postmortem specimens by a demonstrator of morbid anatomy or any other physician interested in the subject.
(7) Demonstrations on the use of the sigmoidoscope.
(8) Opportunities for seeing operations on cases already investigated by the students.

3. *Research Work and Clinical Assistantships.*—After having attended such a special course, a graduate may apply to the teacher responsible for the courses for permission to do research work under him or to act as his clinical assistant for a further period. For example, a graduate interested in children's diseases or orthopedics, after attending a course on one of these subjects could then, if he is regarded as sufficiently qualified, stay on at the hospital as clinical assistant and do research work under the physician for children's diseases or orthopedic surgeon respectively. At the same time he could spend an hour or two each day in following the courses given on these subjects during successive fortnights at the different schools and special hospitals. He would thus get quite exceptional opportunities for study.

4. *General Hospital Practice.*—Facilities will be afforded for students to attend the ordinary hospital practice of the medical schools.

(b) *In the Existing London Postgraduate Schools and Special Hospitals*

Those which have given postgraduate instruction in the past will continue to do so in cooperation with the other teaching institutions working with the association. There will be no limit placed on the duration of their courses of instruction, which may continue throughout the year.

(c) *Provincial, Scottish, and Irish Schools*

The medical schools of the United Kingdom will be invited to cooperate with the London Association in providing periodic courses of instruction for graduates, which would run concurrently with those of the former, especially at times, such as the summer months, when the number of graduates would probably exceed the number who could be adequately dealt with in London.

(*d*) The British Association of Radiology and Physiotherapy has agreed to cooperate.

(*e*) It is hoped that arrangements may be made to utilize for teaching purposes the unique collections of the Royal College of Surgeons and the clinical facilities of metropolitan asylums, fever hospitals, and Poor Law infirmaries, and opportunities should be given for the study of public health and forensic medicine.

III. THE CENTRAL ORGANIZATION

1. The Council of the association will consist of representatives of all participating teaching institutions, and representatives of the Board of Education, the National Health Insurance (Medical Research Committee), the Dominions, and United States of America. The number of representatives of the twelve London schools serving on the Council shall not be less than the total number of representatives of the other bodies. Care should be taken to arrange for representation of subjects taught as well as of institutions.

2. Steps will be taken to frame such a constitution for the association as will render it competent to hold property and to receive a grant from the Board of Education.

3. The Council of the association will have power to appoint an executive committee and such other administrative committees as may be necessary. The permanent whole-time officers and secretarial staff of the association will be appointed by the executive committee.

4. The home of the association will be a building in central London. It will contain the offices of the permanent (secretarial) staff, together with a library, recreation room, and luncheon and tea rooms. A suitable and well equipped building would become the meeting place for the medical graduates of the empire and allied nations.

5. The permanent secretarial staff of the association will cooperate with the teaching institutions in organizing the courses of instruction, and will issue the necessary advertisements, receive the fees, and arrange for the admission of students to the different courses in conformity with the number of students for which each is open.

IV. FINANCE

1. The participating schools will be under no financial liability in connection with the scheme.

2. It is hoped that sufficient money will be forthcoming from private donations to provide for the erection and equipment of the building and some endowment towards its annual maintenance.

3. Each student on admission will be required to pay a registration fee, which will go towards the support of the association, apart from the fees payable for the courses of instruction. It is proposed to apply to the Board of Education for a grant sufficient to make the association selfsupporting.

4. As any grant from the Board of Education will be paid to the association, the medical schools will not receive any direct government grant for postgraduate education, and will therefore only be responsible to the association for the instruction they undertake to give.

5. The fees payable for the various courses will be decided by the Executive Committee in consultation with the individual schools, the object being to maintain as nearly as possible a uniform standard.

6. Each participating school will undertake to give no organized postgraduate courses independently of the central organization, with the exception of classes for special examinations.

7. The income of the association would thus be derived from:

(1) Interest for endowment fund,
(2) Registration fees paid by students,
(3) Fees for courses, and
(4) Government grants;

and the expenditure would be for:

(1) Maintenance of the association's buildings,
(2) Salaries of permanent secretarial staff,
(3) Advertising, printing prospectuses of courses, etc., and
(5) Payment of participating schools.

V. THE POSITION OF THE UNDERGRADUATE STUDENTS IN RELATION TO THE POSTGRADUATE ASSOCIATION

In arranging the courses of instruction care will be taken to interfere as little as possible with the work of the undergraduate students. In the case of lectures no difficulty would arise from the presence of undergraduate students in seats not reserved for the postgraduates, but admission to all other forms of instruction will be restricted to those for whom the course has been arranged.

Book Notices

A STEREOSCOPIC ATLAS OF PLASTIC SURGERY OF THE FACE, HEAD, AND NECK WITH CASE REPORTS. By Joseph C. Beck, M.D., F.A.C.S., and Ira Frank, M.D., F.A.C.S. Price, $7. Pp. 131, with 90 stereoscopic illustrations. St. Louis: C. V. Mosby Co., 1919.

This stereoscopic outfit has been neatly prepared. It includes a compact stereoscope, a textbook and some ninety stereoscopic illustrations demonstrating the various steps in the technic of the operations devised by these two authors. In the text a brief introduction is followed by a historical summary of the subject, carrying the reader from the time of Tagliacozzi through the rhinoplasty with paraffin, first used by Gesurney of Vienna, down through the recent work of Roe and Lexer. The chapters include work on the palate, the eyelids, the elementary principles of plastic surgery, a new method of using silver wire and a series of quite instructive case reports chiefly devoted to injuries of the nose. The stereoscopic illustrations include nasal defects, total loss of the nose, resection of the jaw, defects of the lip and cheek, restoration of the jaw, reconstruction of the ear, tracheotomy, laryngectomy, etc. On the back of each stereoscopic view is printed a descriptive legend. It is, of course, not presumed that a study of this material will qualify the reader as a plastic surgeon. This involves a delicacy of technic to be acquired only through practice and experiment. The war produced many face wounds, and the future will demand more men qualified to do this work. The physician who desires to become conversant with the subject will find this outfit of assistance in his study of it.

The Pathology of the Pneumonia in the United States Army Camps During the Winter of 1917-1918. By William G. MacCallum, M.D. Monograph No. 10 of the Rockefeller Institute for Medical Research. Paper. Price, $1.50. Pp. 147, with 55 illustrations. New York: The Rockefeller Institute for Medical Research, 1919.

Dr. MacCallum was a member of two commissions appointed by the Surgeon-General of the Army to study the pneumonia existing among troops during 1917-1918. The pneumonia referred to was particularly that following measles. The pamphlet does not cover the severe and fatal bronchopneumonia following the influenza epidemic, except for a short supplementary note. Preliminary reports as to the findings of these commissions have appeared in articles by Dr. MacCallum and others published from time to time in The Journal. The present volume goes into the matter in considerable detail and supplements it with fifty-three excellent plates illustrating microscopic and macroscopic pathology of the disease.

Social Medicine, Medical Economics and Miscellany

Health Reorganization in England

The readjustment of social machinery to the new conditions following the war, and the agitation for better governmental control of health conditions, have stimulated a discussion in England of social insurance and governmental health organization equal to the discussion that greeted the Lloyd George social insurance bill in 1910. Not only medical journals, but also popular magazines, such as the London *Graphic,* are discussing the proposed state medical service from almost every possible point of view. The *British Medical Journal* for March 8, 1919, contains a lengthy article on "National Medical Treatment," by Dr. William J. Howarth, medical officer of health of the city of London, and Dr. B. A. Richmond, secretary of the London Panel Committee on National Medical Treatment. The editorial pages contain two editorials on the subject, and two out of the five letters in the correspondence department are also given to its discussion. In the article by Drs. Howarth and Richmond, the question is discussed largely from an administrative standpoint. In view of the prominent position occupied by health matters and the social reforms contemplated by the new government, the authors consider it desirable that the medical profession should either have some definite views as to what future action will prove acceptable to it, or be prepared to submit a scheme approved by the majority of the profession for the consideration of the general public. Evidently the ten years' discussion of this question in England has not advanced the medical profession of that country very much farther than is the case with our profession here. Three methods of altering or enlarging the present method of state insurance in England are suggested: (1) additional powers and responsibilities added to the present panel system; (2) the creation of a whole time service, and (3) the establishment of a part time service based on experience gained in panel work. The limitation of medical benefit to insured persons alone cannot continue, in the judgment of the writers. The insurance act accepts no responsibility for the treatment of persons with physical defects at ages prior to the insurance age. The treatment of the uninsured and of those requiring permanent medical treatment and maintenance, many of whom are now under the care of the poor law authorities, would still remain a problem for solution. If insured persons and their dependents were included in a state scheme of medical treatment, it is estimated that the number remaining outside such a scheme would be between one third and one fourth of the total population. This would leave from two thirds to three fourths to be cared for under the government plan. The various administrative difficulties involved would be of such magnitude, in the opinion of the writers, as to make it sound policy to open the state service to every member of the community who desired to avail himself of it. As the prosperity of the state depends on the health of its citizens, it seems reasonable to expect the state to make the provisions necessary for maintaining health by making medical treatment available for everybody, the cost to be met by different members of the community according to their taxable value. If this principle be accepted, it follows that the best medical treatment should be available for every individual. To effect this, all medical services must be coordinated. The question of the control of the proposed health organization at once arises. Drs. Howarth and Richmond suggest that it devolves on the proposed ministry of health, through the creation of central authority delegating executive power to local bodies created for this purpose or adding these powers to local bodies already existing, while the administration of benefits paid should be under the control of the contributors or their elective representatives. As medical benefits would be paid for by the whole community, the administration would devolve on elected representatives of the community, aided by elected representatives of the profession and elected representatives of those insured.

The scheme outlined by the writers to meet the conditions involves minimum essentials for the public, the profession and the local authorities. Those for the public are: (1) the best possible medical treatment available for each individual, including consultations, surgical, dental and hospital treatment, midwifery service and efficient nursing; (2) the freest choice of medical attendants consistent with administrative efficiency. As affecting the physician, the minimum essentials are: (1) the national service to be open and appointments so arranged that the slacker may be eliminated and ample opportunities afforded the beginner; (2) opportunity for competition; (3) limitation of nonprofessional work to the minimum; (4) control of physicians by the profession; (5) encouragement to physicians to improve their knowledge and to bring the general practitioner into close contact with the specialist, thereby creating better *esprit de corps;* (6) satisfactory remuneration; (7) provision for pensions on a contributory basis.

It is interesting at this point to compare these minimum essentials for physicians with the minimum essentials provided for in the resolutions adopted by the House of Delegates of the American Medical Association at the New York session in 1917. These are: (1) free choice of physicians by the insured; (2) payment to be proportionate to the amount of work done; (3) separation of official supervision from professional treatment of the sick; (4) adequate representation of the medical profession on administrative bodies.

The minimum essentials for local authorities are that: (1) The service shall be sufficiently flexible and elastic for further developments; (2) the sickness rates and knowledge gained be so recorded as to be available for local health officers.

Regarding the method of operation, the writers suggest the establishment of central clinics in areas of varying sizes dependent on the population and social status. One clinic might be required for every twenty or fifty thousand population, each clinic to be provided with attending physicians and nurses, clerks to take care of records, etc., and dispensing pharmacists to fill prescriptions. In larger areas, special clinics for special work would be provided, drawing their patients from a series of primary clinics. The details of attendance and care under various conditions are outlined at length.

General hospitals are suggested as necessary to care for those requiring hospital treatment. Naturally a single general hospital would care for the patients from a large number of primary clinics. Minor and major clinics and general hospitals would, of course, each be provided with such bacteriologic, chemical and diagnostic laboratories, equipment and trained workers as would be necessary. Consultants would be attached to the various hospitals and would carry on both private practice in home consultations and state work in hospital consultations on a basis of payment for state work to be determined by conditions. In places unprovided with hospitals, a small institution suitable for the needs of the district would be established, and in rural districts a modified organization suited to the needs of the community would be developed. In sparsely settled districts, the minor clinics would be replaced by the individual physician and the major clinics and consultation work by traveling clinics. Special operative work and hospital treatment as well as the treatment of emergency cases requiring the care, beyond the ability or resources of the local physician, would be provided for at the nearest general hospital.

Regarding expenses, a tentative estimate is made, admitting present sources of information to be limited. In any district, the fund available would be equal to the total population multiplied by the agreed capitation fee. Physicians would be paid in proportion to the number of units of treatment credited to each during any prescribed period, monthly, quarterly or otherwise. It is estimated that the cost of 27,906 hospital beds in London and the provinces is £2,855,236 (approximately $14,000,000) and that there are at least 45,000 beds provided for in private hospitals at a total cost of £4,500,000 (approximately $22,000,000). In addition there are in public institutions for contagious diseases, insane and feebleminded and the care of the poor, 264,000 beds which are already being paid for by the community, the transfer of which to a new authority would not involve any additional expense. Assuming the population of England and Wales to be 36,500,000, a charge of 13s. ($3.25) per head per annum would amount to £23,725,000 (approximately $118,750,000). Deducting the £4,500,000 for the maintenance of 45,000 hospital beds and £10,000,000 for remuneration of physicians would leave between £9,000,000 and £10,000,000 (from $45,000,000 to $50,000,000) for all the remaining work which would have to be done under the proposed plan.

Several fallacies suggest themselves in considering this estimate. The physician at present is a private practitioner. If he does much work of a high class, he is well remunerated. If he does little work or poor work, his compensation is small. If, however, medical practice is going to be so reorganized as to require each man to do a definite amount of work each day and to come up to a definite standard in his work, the average compensation as it now exists would probably be neither adequate nor fair. Furthermore, if the entire population were given the care which they should have, present hospital accommodations would not be sufficient, since many patients who today need and should have hospital treatment are now deprived of it. There would undoubtedly be considerable saving under such a scheme, as much of the sickness now existing would be prevented and ultimately this would afford a decided margin of saving; but for the first five or ten years at least under the operation of the plan, this saving would not be apparent.

The last section of the article is devoted to pensions for physicians. The plan proposed is that each physician shall contribute to a pension fund an amount based on his salary and annually deducted therefrom, depending on the age of the practitioner at the time he entered the service and varying from 2 to 3.5 per cent. of his annual salary. Optional retirement would be fixed at 60 and compulsory retirement at 65, the amount of pension depending on the length of service, forty years' service entitling the retired physician to two-thirds income.

In the correspondence department in the same issue of the *British Medical Journal* appears a letter from Lieut.-Col. Henry Smith of the Indian Medical Service, protesting against the proposed plan for the "Germanization of the British Medical profession." Government services, he claims, are fit only for third class men, "the stamp of man with little brains and as little character." His communication is mainly a criticism of the internal workings of government services.

The situation in England is essentially different from that in this country because of the following facts:

1. In England the question is a national one; in this country it is a state question.

2. England has already established and in operation a compulsory health insurance plan which includes all employed persons receiving $800 a year or less; this country has not.

3. Social, economic and professional conditions in England differ widely from those in this country.

4. In England the discussion of a proposed ministry of health, analogous to the agitation in this country for a national department of health, alters the situation as it exists in this country, since the two questions are being widely discussed at the same time and various plans proposed for their mutual solution by a single plan.

The bill for the establishment of a national ministry of health is now before Parliament, and its progress will be followed with much interest by physicians in this country.

Medicolegal

Evidence of Employment and Basis for Charges

(*Succession of Levitan et ux.* (*La.*), *79 So. R. 829*)

The Supreme Court of Louisiana, in rendering a decision in favor of the claim of a physician, holds that the testimony of a physician and surgeon, to the effect that he was employed by the mother of his patient, a married woman, rather than by the patient or her husband, and rendered valuable services, for which he considered the mother able to pay, but doubted the ability of the husband so to do, is strongly corroborated by the circumstances that the patient, having succeeded as sole heir to the estate of her mother, hears the testimony, and does not take the stand to question its verity.

It is a matter of common information that physicians and surgeons do not regulate their charges for professional services by any fixed standard of pecuniary value, but, to a certain extent, on the basis of the ability of the patient to pay, and, on that basis, more frequently than otherwise, perhaps, are but poorly compensated. Where such services are shown to have been of the highest value, so far as the life and welfare of the patient were concerned, and the charge is neither unreasonable nor inconsiderate, as compared with the financial ability of the employer, it should be allowed by the court.

The physician in this case rendered professional services to a Mrs. Gordon, daughter of Mrs. Levitan, from about May 27, 1914, until November or December of that year, during which period he successfully performed a cesarean operation on her. There was no issue here as to the value of the services or the necessity of the operation, so far as the life and well-being of the patient were concerned, the real question in the case being one of dollars and cents. In July, 1915, the physician brought suit against Mrs. Levitan and Mr. Gordon, alleging that he had been employed by the former and had performed the operation at her request, and that the latter was cognizant of the fact that the services were rendered and of the necessity therefor; but the case was not brought to trial before the death of Mrs. Levitan in December, 1916, after which the case was discontinued; and in February, 1917, the physician set up the same claim by way of opposition to the provisional account filed by Mrs. Gordon, who was the executrix and sole heir of Mrs. Levitan. It was shown that the physician had been the family physician of Mrs. Levitan and had no acquaintance with Mr. Gordon, but knew that he was a gentleman of very limited means; that Mrs. Levitan brought her daughter to him and requested him to take charge of her; that on November 16 she called him to her house, where her daughter was having convulsions, from kidney trouble; that she was very much excited, and said that she wanted everything done that could be done, and, at her instance, a consultation was had, and the patient was taken to the infirmary, where the operation mentioned was at once performed; that at the infirmary, after the operation, Mrs. Levitan told him to put special nurses on the case, and spare no expense; that he was never, at any time, consulted by Mr. Gordon about the case; and that the services were well worth the amount charged. Attention was called to the circumstance that Mrs. Gordon was present in court when the facts thus recapitulated were testified to, and did not take the stand to deny the truth of the testimony.

The court is of the opinion that the evidence, uncontradicted as it was, and given under circumstances in which it would have been easy and natural for the person most interested to have contradicated it, if she thought that she could conscientiously do so, sufficiently established the employment of the physician by Mrs. Levitan. The provisional account filed by Mrs. Gordon showed only the cash collections which came into her hands, up to the date of its filing, amounting to $9,140.85, against which there were some $4,000 or $5,000 of bills, from which it was inferred that Mrs. Levitan had been engaged in quite an active furniture business. Considering the case as presented, the court finds no sufficient reason for holding that the amount demanded by the physician was unreasonable, or even inconsiderate. Wherefore it is ordered that there be judgment in his favor, recognizing him as an ordinary creditor of this succession, in the sum of $500, and directing that he be placed on the account for that amount, with legal interest thereon from Nov. 16, 1914, until paid.

Allowance for Medical and Hospital Services

(Crescent Coal Co. v. Industrial Commission et al. (Ill.) 121 N. E. R. 171)

The Supreme Court of Illinois holds that, under the workmen's compensation act of the state, an employer was entitled to a credit of but $200, although it expended $744.10 for hospital services, nurses, medicines, physicians, and surgeons in caring for an employee in the illness resulting from his injuries, which terminated fatally. The court says that no question was made but that the services rendered were necessary, and the amount fair, reasonable, and customary for the services performed. They were rendered with the knowledge and consent of the employee and his wife, who became administratrix; and the employer insisted that they should be regarded as part of the compensation. It was not claimed, however, that there was any agreement that they should be so held. On the contrary, the widow stated that she was never told that the amounts were to be taken out of the compensation. If the employer had paid the amount to the widow with the understanding that it was a part of the compensation, it would have been entitled to a deduction of it from future payments, even though it was also understood that the money was to be used for hospital, medical, and surgical purposes, and for nurses, or if it had paid the bills with the understanding that the amount was to be regarded as a part of the compensation it would have been entitled to a like deduction. The employer, however, is not entitled to a deduction for the payment of such expenses without such agreement. A payment made voluntarily or on request must be regarded as having been made gratuitously, or in the expectation of saving the life of the employee or reducing his disability, and reducing the total compensation for which the employer would eventually be liable.

Must Try Suit for Injunction Against Sanatorium

(Giles v. Rawlings (Ga.), 97 S. E. R. 521)

The Supreme Court of Georgia, in reversing an order that refused the plaintiff an injunction, says it appeared from the allegations and prayers of the plaintiff's petition that he was seeking two forms of relief: One wholly to enjoin the operation opposite his residence of a hospital or sanatorium for colored people as being a nuisance per se or in and of itself; the other to prevent its maintenance and operation in such a manner as to constitute a nuisance. As to the latter relief he had no adequate and complete remedy at law, and therefore had a right to invoke the aid of a court of equity. Wherefore, it appearing from the order of the lower court that an injunction was denied solely on the ground that the plaintiff had a complete remedy at law by abatement of the alleged nuisance, and that the court did not pass on the merits of the plaintiff's right to restrain the alleged improper manner of operating the sanatorium, the judgment is reversed, in order that the court below may consider and pass on the facts of the case and determine as to the plaintiff's right to relief.

Society Proceedings

COMING MEETINGS

American Medical Association, Atlantic City, June 9-13.

American Academy of Medicine, Atlantic City, June 9-10.
American Association of Anesthetists, Atlantic City, June 9-10.
Am. Assn. of Genito-Urinary Surgeons, Atlantic City, June 16-17.
Am. Assn. of Indust. Physicians and Surgeons, Atlantic City, June 9.
Am. Assn. of Pathologists & Bacteriologists, Atlantic City, June 16-17.
American Association of Physicians, Atlantic City, June 16-17.
American Climatological & Clin. Assn., Atlantic City, June 16-18.
American Dermatological Association, Atlantic City, June 16-18.
American [illegible] Assn., Atlantic City, June 9-10.
American [illegible] Atlantic City, June 14.
American Medico-Psychological Assn., Philadelphia, June 18-20.
American Neurological Association, Atlantic City, June 16-18.
American Ophthalmological Society, Atlantic City, June 16-17.
American Orthopedic Association, Atlantic City, June 16-17.
American Otological Society, Atlantic City, June 16-17.
American Pediatric Society, Atlantic City, June 16-18.
American Proctologic Society, Atlantic City, June 7-9.
American Psychopathological Association, Atlantic City, June 19.
American Society of Tropical Medicine, Atlantic City, June 16-17.
American Surgical Association, Atlantic City, June 16-18.
American Therapeutic Society, Atlantic City, June 6-7.
Arizona Medical Association, Globe, June 2-3.
Arkansas Medical Society, Little Rock, May 20-22.
Assn. of American Peroral Endoscopists, Brooklyn, June 5.
Assn. for the Study of Internal Secretions, Atlantic City, June 9.
Congress American Phys. & Surgs. of N. A., Atlantic City, June 16-17.
Connecticut State Medical Society, Bridgeport, May 21-22.
Florida Medical Association, Miami, May 20-22.
Illinois State Medical Society, Peoria, May 20-22.
Maine Medical Association, Portland, June 18-19.
Massachusetts Medical Society, Boston, June 3-4.
Michigan State Medical Society, Detroit, May 21-22.
Missouri State Medical Association, Excelsior Spgs., May 26-28.
National Assn. for Study of Epilepsy, Sonyea, N. Y., June 6-7.
National Tuberculosis Association, Atlantic City, June 12-14.
Nebraska State Medical Association, Lincoln, May 19-21.
Nevada State Medical Association, Lake Tahoe, June 20-21.
New Jersey Medical Society, Spring Lake, June 24-25.
North Dakota State Medical Association, Grand Forks, June 24-25.
Oklahoma State Medical Society, Muskogee, May 20-22.
Rhode Island Medical Society, Providence, June 5.
Southern Minnesota Medical Assn., Rochester, June 23-24.
Western Roentgen Society, Cleveland, June 5-6.

MEDICAL ASSOCIATION OF GEORGIA

Seventieth Annual Session, held at Atlanta, April 16-18, 1919

The President, Dr. J. W. Palmer, Ailey, in the Chair

Tonsillectomies in the Army

Dr. Richard R. Daly, Atlanta: In my experience the operation of choice is the Beck-Schenk and no dissection. With proper anesthesia it can be done in adults in a large majority of cases. When done carefully, all the tonsil is removed with the least amount of trauma and with risk of hemorrhage reduced to a minimum. In cases in which dissection is necessary, the Douglas knife and the finger are all that are required. The chief advantage of this method is that the educated finger tells accurately what is being done all of the time, and thus there is no need for sponging or other delay, and there is less trauma than in any other dissection method.

Thirty-four young men who were not making good in their training because of defective breathing were operated on and restored to their commands in condition to complete their instruction and to go to the field. These men would otherwise have been dropped from the rolls.

Removal of Tonsils

Dr. Arthur G. Fort, Atlanta: We use two instruments in enucleating the tonsils, (1) the modified Beck fenestrated protected snare and (2) the Beck with the ordinary snare attachment. The preparation of the patient begins about one week before operation. He is given calcium three times a day to increase the coagulability of the blood, and often the general condition of the tonsil is much improved by the treatment. I prefer general anesthesia, preferably ether, unless there are contraindications.

DISCUSSION ON PAPERS OF DRS. DALY AND FORT

Dr. William C. Lyle, Atlanta: There are indications against the use of general anesthesia in some cases, so that occasionally we have to resort to local anesthesia; but all things considered, general anesthesia is preferable for tonsillectomy. I do not remove both tonsils at the same sitting. I remove one and then wait a week before removing the other.

Dr. H. W. Terrell, LaGrange: I agree with Dr. Daly that tonsillectomy should be done under general anesthesia. In the last three years I have operated in only one case under anesthesia. Dr. Lyle stated that he removes one tonsil and then waits a week before removing the other. If he is able to get the patient to return for the removal of the second tonsil he has been more fortunate than I have been.

Dr. R. R. Daly: If we can remove the tonsils without trauma under general anesthesia and can induce the patients to have both tonsils taken out at the same time, we should do so.

Dr. A. G. Fort: I cannot agree with Dr. Terrell that we should always remove the tonsils under general anesthesia. In some instances you must do so under local anesthesia. A few days ago the vocational board referred to me a man who had tuberculosis. To give him a general anesthetic would endanger his life very much, and to allow the tonsils to remain as they were would reduce his vitality, and therefore also endanger his life.

Radium Therapy for Uterine Hemorrhages

Dr. O. D. Hall, Atlanta: I have used radium in seventy-five malignant cases. Seventy-four cases were inoperable; one case was operable. This patient is living, is in good health, and has had no more hemorrhages since the first application of radium. Of the seventy-five cases treated, the hemorrhages of ten patients were not controlled; five of these had had a hysterectomy. At the time of treating these patients, each had an extensive recurrence, extending into the pelvis. In fifteen of the seventy-five cases the cautery was used. Of the seventy-five cases a history was obtained of uterine hemorrhages of from one to six years' duration before the malignancy was discovered. None of the nonmalignant cases treated by radium have had malignancy to date. This report runs over a period of three years.

DISCUSSION

Dr. L. C. Allen, Hoschton: A striking feature in these cases is the length of time the uterine hemorrhages had existed before treatment was instituted. Uterine hemorrhage from a woman, especially at the menopause, is a matter of grave consideration. Every case should be investigated thoroughly and patients should be taught that any hemorrhage, any excessive menstruation occurring at this period of life, should receive just as serious attention as if it occurred before the menopause or after the menopause. These hemorrhages sometimes are attributed to the menopause, when, as a matter of fact, they are due to something else, frequently a very important pathologic condition that should receive very careful and painstaking investigation

Medical Inspection of Schools

Dr. M. M. McCord, Commissioner of Health, Rome: After visiting the public schools for two years I found that about 25 per cent. of defective children were unable to pay a physician or dentist for correcting their defects. It was decided that to meet the demands of such conditions, a children's free clinic must be established. A quick response followed from every organization in the city and county when the purpose of the clinic was explained, so in a very short time all necessary funds were in hand. The surgical, medical and dental outfits were purchased and the clinic located in the municipal building. Every physician and dentist in the city volunteered his services to the clinic. A competent clinic and a follow-up nurse were employed. Since the children's clinic opened, July 1, 1918, about 400 children whose parents were not able to pay have been treated at this clinic.

Health Organization

Dr. M. F. Haygood, director, Division of Rural Sanitation and Epidemiology, Atlanta: The commissioner of a health department must be able to get the maximum of service from each member of his department. He should have frequent conferences with the members of his force. His clerk should be able to write letters and keep accurate records. She should be taught how to examine for hookworm, also to do malarial and other bacteriologic microscopic work. The school and community nurse should assist in all school examinations and be taught how to find all physical defects. She should do follow-up work to see if the defects are corrected, and if not, make every effort to have this done. She should do child welfare work and look after the tuberculous. The sanitary inspector should be armed with a code of sanitary regulations and inspect frequently all spaces where food and drink are handled. He should also visit all country or suburban homes not having sewerage nor sanitary closets, and persuade the owners of such homes to install these sanitary conveniences.

The Feeding of Babies During Acute Illness

Dr. W. A. Mulherin, Augusta: In all acute febrile diseases the baby should be given less food and more water than in health. In bottle-fed babies this can be easily accomplished by simply increasing the dilution of the food. In breast-fed babies less food can be given by shortening the length of time at breast, lengthening the intervals between nursings and giving water freely between nursing hours. Sick babies tolerate fats very poorly, therefore this ingredient of the food should be reduced, or excluded temporarily. Intolerance to fats lasts much longer than intolerance to carbohydrates and proteins. Therefore, sick babies, artificially fed, should receive formulas made up from fat-free milk, or from skimmed milk containing from 1 to 3 per cent. of fats. As fats and carbohydrates are interchangeable for a short time without being detrimental to the baby's health, the diet should consist largely of carbohydrates, such as barley water, rice water, or gruels made from carbohydrates.

Do not attempt to cure an acute illness, and at the same time fatten a baby; the two things are practically impossible of accomplishment. It is just as important to observe regular hours of feeding, in cases of sick babies, as it is to carry out such procedure with well ones. Ordinarily, however, food should not be given oftener than at three-hour intervals. Some infants and children are so acutely ill that they will refuse all food for several days, and it is only with great difficulty that enough water can be introduced into their system to prevent serious conditions arising from dehydration of tissues. In such cases forced feeding with tube and rectal drip, with 5 per cent. glucose solution, will be found life saving. In babies about 1 year of age, or older, I have found buttermilk to be of great value in feeding during acute illness. It has the advantage of not forming large, tough curds in the stomach, as is so frequently the case when raw cow's milk is used. The reason is that the casein in buttermilk is a lactate of casein, and the rennet of the stomach does not act on it to coagulate it into curds.

Congylonema Scutatum

Col. Charles Wardell Stiles, Fort McPherson: A short time ago Prof. Henry G. Ward of the University of Illinois had a parasite submitted to him from a patient in Arkansas. The patient was a girl, 16 years of age, who showed considerable digestive disturbance, vomiting, nervousness and fever, for a number of months. Finally, a small thread worm was discovered crawling around under the mucosa in her mouth. This worm was extracted and she recovered. Ward believes that this parasite is identical with the parasite found in the esophageal wall of swine.

Just before America entered the war a specimen was sent to me for investigation from Bushnell, Fla. It came from a white girl, 13 years of age. About a year previously she began to have fever of a very irregular character, accompanied by nervous disturbances, and other symptoms. Many diagnoses were made of her case. Finally this thread worm was discovered in her mouth. It was extracted and she recovered her health. These are the only two cases of this particular thread worm that are known. It is well worth while for physicians to be on the lookout for such cases even though they are rare, for in irritable, nervous children these parasites may be present.

Effect of Influenza on Arrested Pulmonary Tuberculosis

Dr. Arch Elkin, Atlanta: Out of the entire number of influenza cases seen by me, I have selected seven. Four of these patients had been under treatment previously for active tuberculosis. The other three patients showed on recent examination active physical signs of pulmonary tuberculosis in addition to manifest evidence of healed lesions. This evidence was corroborated by means of the roentgen ray. It is not surprising that influenza reactivates arrested or apparently cured lesions of tuberculosis. One of the interesting points, however, is the fact that many cases observed, both in private practice and otherwise, show a reactivation of the primary lesions, which in most instances is confined to the apexes, and in addition positive activity in the base of the lung.

What We Have Done in Georgia to Aid in the Control of Venereal Diseases

Dr. Joseph P. Bowdoin, Surgeon, U. S. P. H. S., Atlanta, Ga.: In our campaign for the control of venereal diseases, we decided that education of the masses, of the young men in particular, was of the greatest importance. Other measures adopted were: free Wassermann and laboratory diagnosis, with free arsphenamin to those not able to pay for it; reporting by physicians to enable us to place infections and to keep track of the itinerant carrier; organization of clinics and aid in conducting them, that free treatment could be given in the more populous centers, especially near cantonment zones where the population was dense; repressive measures; closing the red light districts as a war measure (they should be kept closed forever). We have been endeavoring to have the necessary laws enacted by the state and cities to suppress prostitution and control the sources of infection. In our educational campaign we have addressed over 80,000 people. We have shown the government moving picture "Fit to Fight" to men only and women only in a number of the larger towns.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Ophthalmology, Chicago

April, 1919, 2, No. 4.

Vernal Catarrh or Exuberant Pericorneal Conjunctivitis. J. de J. Gonzalez, León, Mex.—p. 233.
Vernal Conjunctivitis in Cuba. J. S. Fernandez, Havana, Cuba.—p. 241.
Trachomatous Changes of Carbuncle. K. Hiwatari, Kyoto, Japan.—p. 243.
Ophthalmic Practice of Today and Bearing on Undergraduate Ophthalmic Teaching. H. Woods, Baltimore.—p. 245.
Training for Ophthalmic Practice. E. Jackson, Denver.—p. 250.
Causes of Heterochromia Iridis: Paralysis of Cervical Sympathetic. F. P. Calhoun, Atlanta, Ga.—p. 255.
Sympathetic Iridocyclitis and Possibly Related *Processes in* Other Parts of Body. D. F. Harbridge, *Phoenix*, Ariz.—p. 269.
Report on Onchocercosis. T. M. Izquierdo, Guatemala, C. A.—p. 274.
Stereoscopic Silhouettes for Testing Estimation of Distances. H. V. Würdemann, Seattle.—p. 275.
Gonococcic Dacryocystitis. F. M. Fernandez, Havana, Cuba.—p. 277.
Friendship Between Donders and von Graefe. M. A. Van Herwerden. *Utrecht, Holland.—p. 277.*

American Journal of Roentgenology, New York

March, 1919, 6, No. 3.

Unsuspected Foreign Body as Frequent Cause of Chronic Bronchitis. D. R. Bowen, Philadelphia.—p. 111.
*Roentgen Ray and Radium in Treatment of Basal Cell Epithelioma. G. M. MacKee, New York.—p. 119.
Roentgen Ray Indications for Tooth Extractions. B. C. Darling, New York.—p. 136.
Gas Gangrene of Leg Due to B. Welchii: Case Diagnosed Roentgenologically. F. A. Sprague, Camp Zachary Taylor, Ky.—p. 145.
Mechanics of Stomach After Gastro-Enterostomy. J. T. Murphy, Toledo.—p. 148.
Roentgenographic Study of Osteitis Deformans. C. W. Perkins, New York.—p. 151.

Roentgen Ray and Radium in Treatment of Basal Cell Epithelioma.—Of the 258 patients treated by MacKee, 222 remained under observation for at least a few months. Among these 222 cases there were 201 clinical cures, or 90 per cent. Fifteen patients were improved; in six instances, the lesions were not even benefited. The cases were not selected. Among 158 cured cases observed for periods of *from six months* to five or more years there were twenty-four relapses, leaving a total of 85 per cent. of possible permanent cures. Sixteen cases were *observed for* five years or more with only one relapse, or about 94 per cent of supposedly permanent cures. Forty-six cases remained under observation for four years. In this series there were nine relapses, leaving 80 per cent. of probable permanent cures. *Seventeen cases* were followed for three years in which there were three recurrences, or 82 per cent. of cures. Of the two-year cases (about two years), there were thirty-two, with five relapses, or 84 per cent. of cures. Thirty-four cases were observed for about one year with five recurrences, or 85 per cent. of cures. Thirteen cases were followed for six months, with one *relapse*, 92 per cent. of cures. Finally, forty-three cases were observed for from one to five months. In this series there were no relapses. Nineteen of the twenty-four patients with relapses were treated again with the roentgen ray, and seventeen recovered. *The two patients who did not respond to the roentgen ray also did not improve under the influence of radium.* Two of the patients *with* recurrences were cured with radium and two by *surgical incision. In five cases relapses occurred a second time within a year after the second recovery. In four of these cases the lesions again disappeared under further* roentgen-ray treatment; *one patient failed to respond either to the roentgen ray or radium. From this it will* be seen that a *relapse should* not cause unnecessary alarm.

American Review of Tuberculosis, Baltimore

April, 1919, 3, *No. 2*

**Tuberculous* Infection. II. Description of Plastic Models (Reconstructions) of *Conglomerate* Tubercle and *Surrounding* Structures in Human Lung. W. S. Miller, Baltimore.—p. 65.
*Fundamentals of Nutrition of Tubercle *Bacillus: Utilization of Some* Amino-*Acids and* Ammonium Salts. E. R. Long, Saranac Lake, N. Y.—p. 86.
*Differentiation *of* Early *Tuberculosis and Hyperthyroidism* by Means of Epinephrin Test. *N. C. Nicholson and E.* Goetsch, Trudeau, N. Y.—p. 109.
*War Against Tuberculosis. W. C. White, *Rome, Italy.*—p. 118.

Reconstruction of Conglomerate Tubercle and Surrounding Structures.—*A description of plastic models of a tubercle* and the surrounding *framework in a human lung is given by Miller. The tubercle came from the lung of a man* who had died of pulmonary tuberculosis. It was situated at the periphery of the lung but did not extend to the pleura. It was sectioned serially and the outlines of each of the seventy-six sections of the series were drawn, magnified 50 diameters, on separate sheets of paper and then transferred to wax plates and the various parts cut out. By this method of study it was found that the tubercle did not belong to any single system of air spaces. It lay between two bronchioli and involved the respiratory bronchioli that arose from the right side of the other bronchiolus, together with their alveolar ducts and many of their atria and alveolar saccules. Many of the latter were greatly reduced in size, while others were greatly dilated. The deformity of the air spaces was so great that they were often *difficult of identification.* This deformity was to a large extent due to the mechanical pressure exerted by the tubercle or to the closure of the openings by which the air spaces communicated with the bronchial tree.

Metabolism of Tubercle Bacilli.—Long reports the results of studies which he has made on the chemical interactions that go on between tubercule bacilli and various mediums on which the former were grown. The tubercle bacillus was grown on a pepsin digest of casein and on biuret-free trypsin and acid digest, much better growth taking place on the former, characteristic proliferation occurring, however, on the latter. Nitrogen analyses of inoculated peptone mediums showed a withdrawal from the mediums of both peptone and amino-acid nitrogen, with a *production of ammonia.* Good growth occurred on glycerol-sodium-chlorid-phosphate mediums containing tenth-molecular concentration of urethane (ethyl ester of amino-formic acid), glycerol (*amino*-

acetic acid), and alanin (amino-propionic acid). The acid amids were also readily utilizable. The corresponding ammonium salts of fatty, ketone, and hydroxy acids did not permit growth. The amins of the three acids mentioned, that is, ammonia, methyl amin and ethyl amin, afforded good growth when used in the form of their hydrochlorids. Methyl and ethyl alcohols were added to ammonium chlorid mediums with advantage. The ammonium salts of the dibasic acids, oxalic, malonic, succinic, malic, and tartaric acids, yielded excellent growth. The course of nitrogen metabolism in a medium containing as its source of nitrogen the dibasic amino acid amid asparagin, was followed, and the amid group was found to be the one chiefly attacked, liberation of ammonia from this group taking place while the amino group was almost untouched. In the monobasic series, the amino group is more readily used than the amid.

Differentiation of Early Tuberculosis from Hyperthyroidism by Epinephrin Test.—For three years Goetsch has been practicing the subcutaneous injections of 7.5 minims of a 1:1,000 solution of epinephrin chlorid in patients who present marked symptoms of hyperthyroidism, but in whom no positive diagnosis can be made by ordinary methods of examination. If the patient, following the epinephrin injection, reacts with manifest symptoms of hyperthyroidism, Goetsch believes that a positive diagnosis of the condition is justified. At the Trudeau Sanatorium, Nicholson and Goetsch tested forty patients by this method. Of eighteen patients whose diagnosis was "clinical tuberculosis, questionable," ten reacted positively and eight negatively; of sixteen with a diagnosis of "clinical tuberculosis, inactive," nine reacted positively and seven negatively; and of six with active clinical tuberculosis, none reacted positively. The authors conclude that the test is a valuable aid in determining whether the disease from which patients are suffering is purely a tuberculosis, a tuberculosis complicated by hyperthyroidism, or a pure hyperthyroidism. Hyperthyroidism, whether or not associated with tuberculosis, will give a positive reaction to epinephrin. Tuberculosis, uncomplicated by hyperthyroidism, does not react positively to epinephrin. They feel that in a considerable number of border-line cases presenting symptoms more or less characteristic of both conditions, they can now pick out those suffering with hyperthyroidism.

War Against Tuberculosis.—White summarizes some impressions that he has obtained as the result of his experiences in antituberculosis organization in France and Italy during the war. He mentions the conditions that are peculiar to each country involved and insists that to be satisfactory organized efforts must not necessarily follow a fixed model but must fit local conditions. In France, England and America the trend is to centralize the administration of all public health problems in a ministry of health. This centralization has not yet become a burning question in Italy, but even with this centralization of power there must come, if the problems are to be handled properly, such an immediate decentralization as will make it easy for the province and city to undertake their own problems, with a maximum of liberty in the development of the equipment necessary to handle their task.

Archives of Neurology and Psychiatry, Chicago

May 1, 1919, 1, No. 5.

*Microscopic Study of Fat in Cerebral Cortex. O. J. Raeder, Boston.—p. 525.
Psychologic Study of Stealing in Juvenile Delinquency. L. P. Clark, New York.—p. 535.
*Peripheral Nerve Injuries. G. E. Price, H. O. Feiss and W B. Terhune, American Red Cross Hospital No. 1, France.—p. 547.
Case of Vagotonia. A. C. Reed, San Francisco.—p. 560.
Contracture Occurring in Partial Recovery from Paralysis of Facial Nerve and Other Nerves. W. G. Spiller, Philadelphia.—p. 564.
Cerebello-Bulbar Polioencephalitis Originating During or After Epidemics of Influenza and Poliomyelitis. Case of Lethargic Encephalitis. C. K. Mills and G. Wilson, Philadelphia.—p. 567.
*War Neuroses as Physiologic Conservations. S. I. Schwab, St. Louis.—p. 579.

Fat in Cerebral Cortex.—Three apparently normal brains from persons of about the same age and of the same sex were examined by Raeder. One of the specimens was obtained from a case in which trauma caused the death. In the other two cases, death was due to bronchopneumonia. In both these cases there was a slight edema of the pia-arachnoid membranes. The consistency of both brain specimens was said to be normal. The somatic changes were similar, being due to an acute bronchopneumonia in both cases. Besides this there were acute changes in the liver, kidneys and spleen, and in one case slight hypertrophy of the heart with some dilatation of the right side. Twenty blocks were selected for microscopic examination from each hemisphere, after treatment with Marchi, sudan III, cresylecht-violet and Weigert staining methods, making forty sections of each brain, or 120 in the three cases. This report deals with the Marchi and sudan III reactions. Fat was found by far more frequently in the fourth and sixth layers —from 63 to 80 per cent.; the next most frequent location being the seventh zone—25 per cent. Fat was found in negligible amounts in the first, second and fifth layers. In the two cases with terminal infection there was a remarkable increase in fat in the third and seventh layers—from 53 to 65 per cent.—as against 7.5 per cent. in the third layers, and 25 per cent. in the seventh layer of the apyretic case. Higher temperatures apparently affect the third and seventh layers. The fat was found irregularly distributed in the cells, both in a general way, in the periphery. The nucleus was never displaced. In some instances the pigment was found bunched at one end or on one side of the cell, sometimes in the fundus, sometimes encroaching on the axon. In other instances, it was more evenly scattered about the periphery of the cell. It was found in the form of minute droplets of varying sizes. The droplets do not coalesce, but keep their spherical form even when closely packed at a given point. Fat was found more generally in the vessels of the cortex, but less frequently in the white matter. The fat was not found in droplets, but it seemed to coalesce and appeared in variously shaped and irregular masses, often at bifurcations or near branches, being irregularly distributed, some twigs being entirely fat free. This irregularity may be correlated with the peculiar anatomic structure of the cerebral vessels.

Peripheral Nerve Injuries.—The purpose of this paper is to place on record the methods used in caring for peripheral nerve cases in the American Red Cross Hospital No. 1, formerly the American Ambulance, and to report the results following nerve suture. There are available for statistical purposes 857 histories of peripheral nerve injuries, with the records of 205 reparative nerve operations, 151 of these having been followed during convalescence for at least six months after operation. An analysis of these records shows that the musculospiral was the nerve most frequently injured in war; the ulnar nerve was involved nearly as often. Following operation, the musculospiral and sciatic nerves make the best recoveries, the results in the case of the sciatic being equally as good as those of the musculospiral. The condition of an injured nerve, when examined by sight and touch at the time of operation, is invariably worse than the previous clinical findings would lead one to expect. When at the time of operation, having utilized all the methods to determine whether simple liberation or excision and suture is the best procedure, if doubt still exists, excise and suture. Repair of an injured nerve as early as possible should be the aim of every surgeon. For this reason the authors urge that in time of war neurologists should be stationed close to the front, so that the wounded may be examined for nerve lesions before going to the operating room. This, by increasing the number of primary nerve sutures, will unquestionably lead to a higher percentage of recoveries. Patients convalescing from nerve reparation should be encouraged to use the extremity affected because volitional effort plays a part in the return of the function. The more respect the surgeon shows nerve tissue when repairing an injury the better will be his results. The nerve should be stripped and handled as little as possible and the ends should be approximated so as to place in apposition corresponding fasciculi of the cut nerve.

War Neuroses as Physiologic Conservations.—This paper sets down in a permanent fashion the story of the effort made by the neuropsychiatric service of the A. E. F. to meet and combat the war neuroses. It has to do with matters of organization and the development of a point of view. It is largely with the latter that Schwab feels that he is properly concerned. The observations were made in Base Hospital No. 117, which was the special hospital for war neuroses at La Fauche. Schwab was medical director of this hospital from its beginning.

Arkansas Medical Society Journal, Little Rock

April, 1919. **15**, No. 11.

*Vincent's Angina of Penis. S. P. Bond, Little Rock.—p. 226.

Vincent's Angina of Penis.—Bond reports a case of ulcer at the mucocutaneous junction of the foreskin, which rapidly spread with the formaton of two more ulcers. There was marked edema, the ulcers had a grayish, sloughing bottom, ragged, irregular, undercut edges, with a foul discharge. Glandular enlargement was not present. A smear from the exudate of this lesion stained with Gram's stain, showed the fusiform bacillus, the thread-like organisms found in the so-called angina of Vincent, and the larger spirilla characteristic of the forms designated by Flügge as vibrios. Intercourse was admitted by the patient, saliva having been used as a lubricant.

Boston Medical and Surgical Journal

May 1, 1919, **180**, No. 18.

Year's Study of Maternity Ward at Boston City Hospital. B. L. Russell, Boston.—p. 487.
Roentgenography of Kidneys. A. E. O'Connell, Worcester.—p. 495.
Closure of Schools in Epidemic. W. H. Devine, Boston.—p. 498.
*Neurosyphilis: Special Points in Symptomatology and Course. A. Myerson, Boston.—p. 499.

Neurosyphilis. — Five cases are reported by Myerson because they represent somewhat unusual and yet rather important phases of neurosyphilis. The first case points out the importance of spinal puncture. The blood remained negative during many examinations while the spinal fluid was constantly positive. In the second case the Brown-Sequard syndrome appeared in almost classic purity. Moreover, the spinal fluid showed the xanthochromia syndrome. In the third case a mental disease apart from the neurosyphilis manifested itself almost as if the neurosyphilis were not present, while the neurosyphilis gave practically no symptoms. The fourth and fifth cases are important because they affect a brother and a sister. The brother, a paretic clinically, was treated and had a fine remission of clinical symptoms, but the spinal fluid was unchanged. The sister, presenting none of the signs of paresis, was treated for a long time for orthopedic symptoms. She presented in her spinal fluid the syndrome of paresis. Myerson emphasizes the fact that these cases form a group, which, though each is individual and unusual, is characteristic of neurosyphilis in the wide range of symptoms presented.

Journal of Experimental Medicine, Baltimore

May 1, 1919, **29**, No. 5

*Effect of Bile on Clotting Time of Blood. H. Haessler and M. G. Stebbins, New York.—p. 445.
Characteristic Localization of Bacillus Abortus in Bovine Fetal Membranes. T. Smith, Princeton.—p. 451.
*Results of Prophylactic Vaccination Against Pneumonia at Camp Wheeler. R. L. Cecil, New York, and H. F. Vaughan, S. C., U. S. Army.—p. 457.
*Action of Strophanthin on Living Cat's Heart. S. A. Levine, New York.—p. 485.
Functional and Pathologic Study of Chronic Nephropathy Induced in Dog by Uranium Nitrate. W. deB. MacNider, Chapel Hill, N. C.—p. 513.

Effect of Bile on Clotting Time of Blood.—This is a report of an investigation made by Haessler and Stebbins on whether or not bile or bile salts, present in the blood in jaundice, are in themselves capable of causing the increase in the coagulation time. They found that within certain limits clotting time depends on the percentage of bile present in solution and that the reaction is the same in experiments with pure solutions of the substances concerned in coagulation, as in whole plasma. Apparently bile and bile salts do not interfere with the formation of thrombin, since the prolongation of clotting time is just as great when preformed thrombin is added in ample quantity to fibrinogen solution, as when thrombin must be formed from its precursors in the presence of bile. It was found that there was a retardation of clotting, great enough to be detected by clinical methods, with amounts of bile greater than 5 per cent. The relation of bile pigments and bile salts in the blood in janudice has not been determined, but to the authors it would seem possible for the salt to be present in sufficient concentration to prevent clotting.

Prophylactic Vaccination Against Pneumonia at Camp Wheeler.—At Camp Wheeler 13,460 men, or about 80 per cent. of the entire camp strength, were vaccinated against pneumonia with pneumococcus lipovaccine. The dosage employed in all cases was 1 c.c. of the lipovaccine, containing approximately 10 billion each of Pneumococcus Types I, II and III. Both the local and general reactions produced by the vaccine were usually mild. Only 0.7 per cent. of those who received the vaccine were sufficiently affected to need hospital care. None of these men was seriously ill, and a majority of them returned to duty on the second or third day after admission. Most of the troops inoculated were under observation for two or three months after vaccination. During this period there were thirty-two cases of pneumococcus Type I, II and III pneumonia among the vaccinated four fifths of camp, and forty-two cases of pneumonia of these types among the unvaccinated one fifth of camp. However, if all cases of pneumonia that developed within one week after vaccination are excluded from the vaccinated group, there remain only eight cases of pneumonia produced by fixed types, and these were all secondary to severe attacks of influenza. There is no evidence whatever that pneumococcus vaccine predisposes the individual even temporarily toward eithe pneumococcus or streptococcus pneumonia. The weekly incidence rate for pneumonia (all types among the vaccinate troops was conspicuously lower than that for the unvacci nated troops. The pneumonia incidence rate per thousan men during the period of the experiment was twice as hig for unvaccinated recruits, and nearly seven times as hig for unvaccinated seasoned men as for seasoned men. Influenz causes a marked reduction in resistance to pneumonia eve among vaccinated men. Of the 155 cases of pneumonia (a types) developing one week or more after vaccination, 13 were secondary to influenza. The death rate for 155 cas of pneumonia (all types) that developed among vaccinat men one week or more after vaccination was *only 12.2* p cent., whereas the death rate for *327* cases of *all types* th occurred among unvaccinated troops was *22.3* per cent. Th death rate for primary pneumonia among vaccinated troo was 11.9 per cent.; among unvaccinated troops it was 31 per cent., almost three times as great. On the other han the mortality rate in pneumonia secondary to influenza about the same for the vaccinated and unvaccinated troo

Action of Strophanthin on Heart.—In the experiments ma by Levine, in which crystalline strophanthin was inject intravenously, the amount of the drug needed to produ toxic results as shown electrocardiographically was prac cally independent of the speed of administration. Injectio of the drug were made at various speeds, with intervals four or more days between experiments. The total amou required to produce the toxic effect did not vary significant A theory of the action of strophanthin is formulated Levine which reconciles the conflicting views relating to t importance of concentration and of total amount of the dr It supposes that the time required to produce a given eff in a heart varies inversely with the concentration of t active principle. The heart utilizes only a small portion the neighborhood of 10 per cent.) of the drug to which it exposed, no matter what the concentration. A toxic eff results when the heart has taken up a certain total amo of the drug which is a definite small fraction of its o weight. If this theory is correct, it explains why in conc trated solutions the total amount is not important, for small part that is taken out by the heart does not apprecia alter the concentration, while when very dilute solutions small quantities are used the amount taken up by the he diminishes the remaining concentration appreciably; that the "digitalis pressure" becomes lessened. In these experime the rapid injections forced an adequate amount of strophanthin into the heart rapidly and produced the toxic effect; in the slow injections the same total amount of drug was taken up by the heart, only more slowly. Levine claims that these experiments have an importance in clinical medicine. They suggest a method for intravenous medication with strophanthin designed to reduce the danger due to using the drug. After the ventricles have fibrillated, there is no constant way of reviving a heart. Occasionally, as in one experiment, resuscitation may take place after ventricular fibrillation and standstill by massage of the heart without opening the chest. No opinion is offered on the practical value of this method.

Kentucky Medical Journal, Bowling Green

May, 1919, **17**, No. 5.

*Hemorrhage in Common Nose and Throat Operations. S. G. Dabney, Louisville.—p. 204.
Newer Operations in Chest Surgery. L. Frank, Louisville.—p. 208.
Pellagra or Erythema Endemicum. J. C. McCreary, Eddyville.—p. 214.
Influenza Pneumonia Vaccine (Prophylactic) in Treatment of Pneumonia. J. F. Adams, Bagdad.—p. 217.
*Report of Influenza Treated with Serum from Recovered Cases. O. O. Miller and W. T. McConnell, Louisville.—p. 218.
Some Lessons Learned from Present Epidemic of Influenza. H. T. Crouch, Bardwell.—p. 219.
Surgery of Gall-Bladder. J. R. Wathen, Louisville.—p. 220.

Hemorrhage in Nose and Throat Operations.—Abstracted in THE JOURNAL, Oct. 5, 1918, p. 1166.

Influenza Treated with Serum from Recovered Cases.—Three cases of influenza, two complicated by pneumonia, were treated by Miller and McConnell with injections of serum obtained from persons convalescing from pneumonia. The results of this treatment lead the authors to believe that the injection of serum from recovered patients into desperately ill patients infected with the same organism is logical and is of some value.

Medical Record, New York

May 3, 1919, **95**, No. 18.

Etiology of Pneumonia: Autolyzed Lung Tissue Serum Treatment. F. B. Turck, New York.—p. 719.
Special Treatment That Should Be Given Milk Intended for Infant Feeding. J. M. W. Kitchen, East Orange, N. J.—p. 725.
Disequilibrium of Mind and Nerves in War. A. MacDonald, Washington.—p. 727.
Should Hypnotism Be Used to Correct Stammering? E. Tompkins, Pasadena, Cal.—p. 731.
Medical and Surgical Lessons of the War. War Wounds of Genito-Urinary Organs. G. Luys, Paris.—p. 734.

Military Surgeon, Washington, D. C.

May, 1919, **44**, No. 5.

*Aviation and Wounded in Sahara Desert. T. Tuffier, Paris.—p. 437.
Sanitation of Field Army. H. Zinsser, New York.—p. 445.
Lengthening of Stumps. F. J. Cotton, Boston.—p. 465.
Some Unprotected Routes of Infection. G. A. Soper.—p. 469.
Simple Method of Immobilization and Control of Plastic Skin Flaps to Penis. V. P. Diederich, Chicacgo.—p. 474.
Anatomic Changes in Respiratory Tract Initiated by Irritating Gases. M. C. Winternitz, New Haven, Conn.—p. 476.
Wound Shock. W. B. Cannon, Boston, Mass.—p. 494.
Sexual Infections in and out of British Army. J. B. Clark, New York. —p. 507.

Aviation and Wounded in Sahara Desert.—Reference to the subjects discussed in this paper have been made a number of times in the Paris Letter, covering practically the same ground.

Minnesota Medicine, St. Paul

May, 1919, **2**, No. 5.

Bismuth Paste Treatment of War Wounds. E. G. Beck, Chicago.—p. 157.
Fractures Considered as Potential Deformities. M. S. Henderson, Rochester, Minn.—p. 163.
Relation of Physician and Dentist in Treatment and Prevention of Disease Due to Dental Focal Infection. H. B. Clark, St. Paul.—p. 168.
Thyroid Deficiency: Iodin Requirement During Pregnancy. G. E. Smith, London, Canada.—p. 172.
Control of Venereal Diseases. E. C. Gager, St. Paul.—p. 173.
Trans-Rectus Incision in Upper Abdomen. R. E. Farr, Minneapolis.—p. 176.
Tuberculosis in Children: Its Prevention. W. D. Beadie, St. Paul.—p. 181.

New Orleans Medical and Surgical Journal

May, 1919, **71**, No. 11.

Blood Chemical Methods in Diagnosis and Prognosis. R. B. H. Gradwohl, St. Louis, Mo.—p. 456.
Delusion and Dream. Comment on "Freud Theory." S. T. Rucker, Memphis, Tenn.—p. 467.
Medical Experiences Overseas. J. B. Elliott, Jr., New Orleans.—p. 470. J. T. Halsey, New Orleans.—p. 473. J. W. Morris, Somerville, Tenn.—p. 474. I. I. Lemann, New Orleans.—p. 476.

New York Medical Journal, New York City

May 3, 1919, **109**, No. 18.

Early Recognition of Carcinoma of Stomach. J. B. Deaver, Philadelphia.—p. 749.
Diagnosis of Gastroduodenal Ulcer. A. Bassler, New York.—p. 751.
Medical Treatment of Gastric and Duodenal Ulcer. H. H. Roberts, White Sulphur Springs, W. Va.—p. 755.
*Unusual Case of Carcinoma of Esophagus. A. S. Hyman, Dorchester, Mass.—p. 759.
*Meningitis: Report of Cases. H. I. Goldstein, Camden, N. J.—p. 760.
*Influenza Pneumonia Treated by Blood Transfusion. F. B. Bogardus, Eureka, Mont.—p. 765.
Postinfluenzal Empyema. M. W. McDuffie, New York.—p. 766
Medication by Inhalation. P. D. Shultz, New York.—p. 768.
Secondary Suture and Skin Graft Under Local Anesthesia. J. A. Miller, New York.—p. 770.
*Studies in Epidemic Encephalitis (Epdemic Lethargic Encephalitis). I. Strauss, S. Hirshfeld, and L. Loewe, New York.—p. 772.
Prophylaxis and Treatment of Influenza. L. T. de M. Sajous, Philadelphia.—p. 773. To be Continued.

Carcinoma of Esophagus.—The following case reported by Hyman is interesting because the diagnosis was made only at the postmortem, although the carcinomatous process had involved the entire lower portion of the esophagus and the adjacent structures. A man, aged 58, in apparently good health entered the hospital for the relief of a large swelling in the right side of his neck which caused him no trouble, save that he was forced to wear larger collars than had been his custom. With the exception of the mass in his neck the physical findings were practically negative. Because of its acute onset, a tentative diagnosis of septic cervical adenitis was made, although the absence of pain and tenderness could not be accounted for. Malignancy was suggested, but examination of the the lips, gums, tongue, tonsils and oropharynx failed to reveal the site of any primary malignant disease. Roentgen-ray examination of the chest showed nothing remarkable in the lungs. Examination of a piece of tissue removed from the mass showed it to be cancer of the medullary type. Death ensued three months later. Postmortem examination disclosed tremendous involvement of the lower part of the esophagus and adjacent structures by a malignant growth which had not been recognized or even suspected previously, showing that an extensive pathologic process can occasionally involve the esophagus without that organ responding in its usual immediate fashion, and that unexplainable malignant disease of the right cervical glands may be secondary to "silent" esophageal carcinoma.

Meningitis.—Goldestin reports five rather interesting cases: one, a tuberculous meningitis occurring in an adult; the second, meningitis in a new-born infant; the third, epidemic cerebrospinal meningitis in a young child; the fourth, tuberculous meningitis in a 17-year-old boy; the fifth case, meningismus, or nonbacterial toxic meningitis, complicating otitis and bronchopneumonia in a 3½-year-old child, with a brief discussion of the symptoms and more important diagnostic and therapeutic features of meningitis in general.

Influenzal Pneumonia Treated by Blood Transfusion.—Citrated blood, taken from patients recently recovered from influenzal pneumonia, has been injected by Bogardus in six cases, and the results have been favorable. The author claims that the death of these two cannot be held against the method, however, as in one case it was not done until twelve hours before death, and in another case the patient was so far away from town that he could not be properly watched. In the four patients who recovered the results were immediate and certain.

Lethargic Encephalitis.—The authors report a series of experiments performed in an attempt to establish the etiology of epidemic lethargic encephalitis. Inoculation of emulsion of human brain produced lesions in the monkey characteristic of the lesions found in epidemic lethargic encephalitis. The inoculation of the filtrate of the mucous membrane of the nasopharynx of a patient not suffering from epidemic lethargic encephalitis produced no evidence of disease in the monkey. The inoculation of the washings of the nasopharynx in a case of epidemic lethargic encephalitis produced paralysis in the monkey accompanied by pleocytosis in the spinal fluid. A filtrable virus obtained from the mucous membrane of the nasopharynx in a fatal case of epidemic lethargic encephalitis produced hemorrhagic encephalitis in the monkey. This virus has been carried through a second generation.

Oklahoma State Medical Assn. Journal, Muskogee

February, 1919, **12**, No. 2.

Pyelitis. J. H. Hays, Enid.—p. 27.
What Simple Examining Cystoscope May Reveal to General Practitioner. F. K. Camp, Oklahoma City.—p. 32.
Quarter of a Century in Emergency Surgery. J. S. Fulton, Atoka—p. 37.
Modern Treatment of Burns. O. W. Rice, Alderson.—p. 40.
Use of Dictaphone in Case History in Hospital and Office. F. S. Clinton, Tulsa.—p. 42.
Diabetic Coma. L. A. Riely, Oklahoma City.—p. 43.
Case of Traumatic Infection Resulting from Influenza. M. H. Newman, Oklahoma City.—p. 45.

Public Health Journal, Toronto

April, 1919, **10**, No. 4.

Sanitary Conditions Aboard Transports. J. J. Heagerty, St. John, N. B.—p. 145.
Binghamton Health Center. C. J. Longstreet and S. J. Koerbel, Binghamton, N. Y.—p. 148.
Essentials of Adequate Investigation. M. E. McPhedran, Toronto.—p. 151.
Causes of Poverty. F. N. Stapleford, Toronto.—p. 157.
Sources of Information Regarding Family.—p. 161.
Reconstruction in Industrial Life.—S. Z. Batten, Philadelphia.—p. 166.

Social Hygiene, New York

April, 1919, **5**, No. 2.

Prohibition and Social Hygiene. R. A. Woods, Boston.—p. 137.
Illinois Social Hygiene League, Formerly Red League. R. H. Gault, Chicago.—p. 147.
Case Against Prophylaxis. E. H. Hooker.—p. 163.
Porto Rican Experiment. H. Goodman, New York.—p. 185.
Social Hygiene Sergeant. W. A. Bradley.—p. 193.
Experiences of a Lecturer. R. S. Yarros, Urbana, Ill.—p. 205.
Adequate Reproduction. R. H. Johnson, Pittsburgh.—p. 223.
Is Education Worth-While Factor in Control of Venereal Diseases? H. E. Kleinschmidt.—p. 227.
Vice Problem in Porto Rico. G. L. Payne, Indianapolis.—p. 233.

Southwest Journal of Medicine and Surgery, El Reno

April, 1919, **27**, No. 4.

After the War—What? B. L. Jenkins, Clarendon, Tex.—p. 73.
Postbellum Medical Problems. L. W. Cotton, Enid, Okla.—p. 79.

Surgery, Gynecology and Obstetrics, Chicago

May, 1919, **27**, No. 5.

*Pancreatic Lymphangitis. J. B. Deaver, Philadelphia.—p. 433.
*Practical Considerations with Regard to Permanent Colostomies. W. E. Sistrunk, Rochester, Minn.—p. 436.
*Treatment of Hodgkin's Disease. C. F. Burnam, Baltimore.—p. 440.
*Ectopic or Pelvic Kidney. E. S. Judd and S. W. Harrington, Rochester, Minn.—p. 446.
*Operative Treatment of Undescended or Maldescended Testis with Especial Reference to End-Results. W. B. Coley, New York.—p. 452.
*Prostatectomy, with Preparatory and Postoperative Treatment. B. Lewis, St. Louis.—p. 459.
*Polyposis of Stomach. D. C. Balfour, Rochester, Minn.—p. 465.
Rôle of Cystic Duct in Recurring Cholecystitis. J. E. Else, Portland, Ore.—p. 467.
*Two Signs in Chronic Appendicitis. R. T. Morris, New York.—p. 472.
*Congenital Diverticula of Intestines: Report of Case of Tumor Growing from Tip of Apparently Congenital Diverticulum in Lower Sigmoid Region. W. T. Black, Memphis, Tenn.—p. 473.
War Amputations. P. D. Wilson, Columbus, Ohio.—p. 478.
Syphilitic Induration of Vulva: Report of Four Cases. J. F. Gallagher, Nashville, Tenn.—p. 482.
*New Growths of Testis. C. R. O'Crowley and H. S. Martland, Newark, N. J.—p. 486.
*Radical Operations for Teratoma Testis: Report of Five Cases. F. Hinman, San Francisco.—p. 495.
Splenectomy in Diseases of Spleen: Four Cases. E. M. Prince, Birmingham, Ala.—p. 509.
*Gynecologic Pelvic Drainage. J. W. Boveé, Washington.—p. 514.
*Reconstruction of Uterus. C. R. Robins, Richmond, Va.—p. 516.
Use of Continued Extension by Means of New Extension Frame in Bloodless Reduction of Congenital Dislocation of Hip. J. W. Churchman, New Haven, Conn.—p. 518.
*Gauze Sponge Spontaneously Expelled from Urinary Bladder. G. P. LaRoque, Richmond, Va.—p. 522.

Pancreatic Lymphangitis.—Deaver emphasizes the importance of early surgical treatment of upper abdominal disease before a possible pancreatitis has time to get in its destructive work. Cases in support of this view are cited.

Permanent Colostomies.—Abstracted in The Journal, Jan. 18, 1919, p. 1219.

Treatment of Hodgkin's Disease.—Abstracted in The Journal, Jan. 18, 1919, p. 1220.

Ectopic or Pelvic Kidney.—Nineteen cases of ectopic kidney are recorded by Judd and Harrington. In nine of these, operations were done because of pathologic conditions in the misplaced kidney. In the remaining ten cases the condition was discovered either during the course of some other operation or in making a routine examination of the kidney. In these ten cases the kidney, while misplaced, was not producing any symptoms and apparently was functioning normally. When the ectopic kidney is pathologic, the symptoms are the same as when the condition is present in a normally placed kidney. The diagnosis depends on the physical findings, the roentgen ray and the kidney examinations. The differential diagnosis is more difficult in the female than in the male because of the frequency with which the ectopic kidney causes symptoms referable to the adnexa. The most common error in diagnosis in the male has been in differentiating between the dystopic kidney and inflammation in the appendix. From a surgical point of view the treatment of ectopic kidney differs in no essential from the treatment when the organ is in its normal position. The problems presented by the ectopic kidney during pregnancy and parturition are often difficult to decide, but fortunately most deliveries are accomplished without surgical intervention. The surgical treatment of pathologic conditions in the ectopic kidney is practically the same as for like conditions in normally placed organs.

Malignancy Following Operative Treatment of Undescended or Maldescended Testis.—The question of whether the traumatism incident to the operation on the undescended testis might not favor the development of malignant disease, Coley says, is one that should be considered, although at present it cannot be answered definitely. In none of the 415 cases in which operation was done at the Hospital for Ruptured and Crippled during the past twenty-nine years, has malignant disease been known to develop; however, Coley has observed one case of sarcoma of the testis in which the disease was either present at the time or developed shortly after the operation for undescended testis. The end-results in this case show that it is possible to cure the hernia in practically all cases. The result accomplished by the operation, the cure of the accompanying hernia, would seem to justify advocating operation for the undescended testis in adults.

Prostatectomy.—Abstracted in The Journal, Jan. 18, 1919, p. 1218.

Polyposis of Stomach.—Only one case of this kind has been seen at the Mayo Clinic in approximately 69,000 abdominal sections, 8,000 of which were for gastric lesions. A correct diagnosis was established before operation. From a study of this case, in conjunction with such cases described in the literature, it would appear that gastric polyposis has sufficient characteristics to be classified as a separate entity and should not be classified with single polyps or papillomatous masses (the latter usually malignant) occasionaly found in the stomach, and to which the term gastric polyposis has at times erroneously been applied. Balfour emphasizes that the condition would have been quite unsuspected had it not been for the roentgenogram and its interpretation. The age of the patient, 31 years, is unique because it is the earliest age at which the condition has been recognized.

Two Signs in Chronic Appendicitis.—Abstracted in The Journal, Jan. 25, 1919, p. 309.

Congenital Diverticula of Intestines.—Abstracted in The Journal, Jan. 18, 1919, p. 1219.

New Growths of Testis.—In considering tumors of the testis O'Crowley and Martland direct attention to the fact that nine times out of ten the tumor is malignant and that early diagnosis and radical treatment are of prime importance in order to prevent metastasis and consequent death. They report thirteen cases. Of these, seven patients are dead from metastases. The youngest patient was aged 5½ years, the oldest, 52 years. The longest duration of the disease was two years and seven months; the shortest, ten weeks. In six cases a definite history of trauma was given. In one case an undescended testis was the seat of the growth. Among 110,000 male patients admitted to a number of London hospitals during a period of twenty years there were sixty-five cases of malignant disease of the testis. Of fifty-seven cases with complete histories, nine were in ectopic testes. In 182,729 male admissions to general hospitals of New York City there were three cases of malignant growth of intra-abdominal testes, or about one in each 60,000 cases.

Radical Operations for Teratoma Testis.—Hinman emphasizes the relative simplicity and the real necessity of radical measures in these cases, and, by way of demonstration, reports five successful cases; four of the patients would certainly have died from metastases if simple castration alone had been performed, and in all of these the operative difficulties were not great and the postoperative complications insignificant. Hinman dissects the lymphatic tissues from off the iliac vessels and aortic bifurcation and the preaortic lymph areas and spermatic vessels. In every one of his cases there were masses of lymph tissues lying on the external and common iliacs as far up as the aortic bifurcation. This area had to be cleaned separately from the spermatic vessels. All five patients enjoy perfect health now nine months, seven and one-half months, four months, three months, two months and three years and six months, respectively, since operation. The finding in four cases of metastatic tumor demonstrates the uselessness of simple castration and the necessity of radical surgery.

Gynecologic Pelvic Drainage.—Abstracted in The Journal, Jan. 18, 1919, p. 1220.

Reconstruction of Uterus.—Abstracted in The Journal, Jan. 18, 1919, p. 1220.

Gauze Sponge Spontaneously Expelled from Bladder.—Abstracted in The Journal, Jan. 18, 1919, p. 1218.

Virginia Medical Monthly, Richmond

April, 1919, **45**, No. 1.

Myocardial Hydrothorax: Report of Case. A. G. Brown, Jr., Richmond.—p. 1.
*Preoperative and Postoperative Treatment of Neoplasms with Radium. A. M. Willis, and S. W. Budd, Richmond.—p. 5.
Quinin. W. T. Parrott, Kinston, N. C.—p. 7.
Pregnancy Following Hysterectomy. W. T. Griggs, Richmond.—p. 9.
Foreign Body, Shrapnel in Right Antrum, Removed. J. B. Green, Norfolk.—p. 9.

Treatment of Neoplasms with Radium.—Willis and Budd do not believe that radium will ever do as much for certain growths as surgery, but, at the same time, as a preliminary and as a follow-up treatment, much can be expected from it.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Dublin Journal of Medical Science

April, 1919, **147**, No. 568

Special Supports of Uterus. A. F. Dixon.—p. 149.
Five Hundred Operations from Gynecologic Department, Mercer's Hospital, Dublin. B. Solomons.—p. 154.
Major Operations in Private Practice. D. Hennessy.—p. 164.

Glasgow Medical Journal

April, 1919, **91**, No. 4

Diagnostic Mechano-Therapeutics. E. F. Cyriax.—p. 193.
Cases Simulating Renal Calculus. D. Newman.—p. 204.
Influence of Respiration on Intra-Abdominal Pressure. G. H. Edington.—p. 215.

Medical Journal of Australia, Sydney

March 8, 1919, **1**, No. 10

*Syphilitic Factor in Insanity. W. A. T. Lind.—p. 187.
Toxic Syndrome. S. Pern.—p. 189.
Scopolamin and Morphin in Labor. A. G. H. Colquhoun.—p. 188.
*Nomenclature of Crucial Ligaments. G. A. Sampson.—p. 190.
Prevention of Pneumonic Influenza. N. W. Mackwill.—p. 190.

Syphilitic Factor in Insanity.—In Lind's opinion it would be absurd to claim that syphilis is the cause of every case of insanity, but it would be absurd to deny the alarming frequency of the combination of psychopathic inheritance and acquired or congenital syphilis. The age of the general paralytic (acquired) used to be somewhere about 49, but, judging by the postmortem examinations of the last few years, it seems to be gradually approaching 30. In other words, syphilis is acquired almost before the youth is mature. To Lind it looks as if the stone, bronze, and iron ages will be recognized by posterity as being followed by the syphilitic age. For the sake of the ignorant, he suggests the use of posters warning concerning venereal disease.

Nomenclature of Crucial Ligaments.—Sampson suggests that a more rational and more informative naming of the crucial ligaments is as follows: taken from the position of attachment of each ligament on, first, the proximal, and then the distal articulating bone: Posteroanterior (or longer) crucial ligament; posteroposterior (or shorter) crucial ligament, for both ligaments are attached proximally, each at its own separate area, at the posterior of the femur within the intercondyloid notch. The one runs downward, inward, and forward, to be attached to the tibia near the front of the joint, in front of the tibial spine, while the other runs downward, outward, and backward, to gain attachment at the hinder part of the tibia, close to the popliteal notch.

March 15, 1919, **1**, No. 11

*Present Epidemic of Influenza: Bacteriology. R. P. McMeekin.—p. 209.
Id. Complications. V. M. O'Grady.—p. 210.
Id. Symptomatology. W. S. Newton.—p. 211.
Admonitions Concerning Present Pandemic of Virulent Pneumonia. S. T. Knaggs.—p. 213.
*Gauze Mask: Some Experiments. R. F. Llewellyn.—p. 214.
Congenital Defects in Lower Bowel Recurring in Three Successive Children of One Family. A. S. Walker.—p. 216.

Bacteriology of Present Influenza Epidemic.—Bacteriologic examinations were made by McMeekin of thirteen smears and cultures of sputums, seven cultures taken from lungs postmortem, and twenty blood cultures. The predominating organisms found in sputums have been influenza bacilli, gram-positive diplococci resembling pneumococci and indistinguishable from them, and *Micrococcus catarrhalis,* all in large numbers. Coccal forms have also been present. Cultures taken from the lungs direct postmortem have shown influenza bacilli, pneumococci, *M. catarrhalis,* streptococci and staphylococci in a majority of cases. Of the twenty blood cultures examined, three showed *Staphylococcus albus,* probably a contamination, four showed tiny gram-negative bacilli morphologically indistinguishable from influenza bacilli, but showing cultural differences, while one showed Friedländer's bacillus.

Gauze Mask.—It has been suggested that the saturation of the inner layers of the mask for some hours by the moisture of the breath may tend to determine the majority of the bacilli caught in the mask to the inner layers thereof, and that if the mask be then allowed to become dry and be reapplied before death of the bacilli occurs, the wearer may get a sudden and large dose of them. Llewellyn therefore suggests that after the mask has been washed, sterilized and dried it be dipped in a weak solution of glycerol in water, say 5 per cent., and again hung up for some hours. All the water which the hygroscopic glycerol could not hold would then have evaporated, leaving the mask very slightly moist, while the antiseptic qualities of the glycerol would be unfavorable to the multiplication of the bacilli in the mask. A trace of thymoil might be added to the glycerol solution.

March 22, 1919, **1**. No. 12

Treatment of Urethral Stricture by Excision. R. H. Russell.—p. 231.
*Nature of Recent Australian Epidemics of Acute Encephalo-Myelitis: Successful Conveyance of Virus to Sheep, Calf and Horse. J. B. Cleland and A. W. Campbell.—p. 234.
Wandering Bullet. H. C. Colville.—p. 236.

April 5, 1919, 1, No. 14

Importance of De-Ionization in Treatment of Plumbism in Queensland Children. J. L. Gibson.—p. 272.
Some Recent Advances in Knowledge of Bilharziasis. N. H. Fairley.—p. 274. To be continued.

Recent Epidemics of Acute Encephalo-Myelitis.—This so-called "mysterious disease," which first made its appearance in New South Wales, Queensland and Victoria, and which was reported by several clinicians in 1917, is not the same as epidemic lethargic encephalitis, in the opinion of Cleland and Campbell. They believe that the acute encephalomyelitis under discussion is a distinct and hitherto unrecognized entity resembling ordinary infantile paralysis and at the same time histologically resembling hydrophobia. The disease is always present in sporadic form. Investigations carried out during 1918 by Cleland, Campbell and others seem to give strong support to the contention that the disease is a hitherto unrecognized entity. The points to which attention is specially directed by the authors are the following: There is no record of an epidemic of acute poliomyelitis in which signs of cerebral irritation have so strikingly dominated the clinical course, nor of one in which there has been such a high mortality rate (70 per cent.), nor of one in which such a large proportion of adults have fallen victims. Histologic examinations of the brain and spinal cord from sixteen human cases and from various experimentally infected animals have all shown lesions of a similar and, as regards distribution, distinct kind. The first and most important change is a thickening of the veins. The vein wall is surrounded by a collar or sheath or sleeve of cells which sometimes fills and distends the perivenous space. The vessels so affected may be found apparently in any part of the brain or spinal cord, though not necessarily in the same situation in all cases. Some vessels may be affected and others escape. In early cases most of these cells are indistinguishable from lymphocytes, though interspersed among them may be some cells of fixed connective tissue origin. Later the cells may show more protoplasm and an indented nucleus—a stage toward organization. In addition to these perivenous sheaths, there is intense congestion of all vessels and sometimes evidence of stasis. As secondary phenomena degeneration of nerve cells may occasionally be found, probably due to interference with their nutritive supply.

The disease in monkeys, of which the authors have had twenty examples under observation, seems not to agree with that described in these animals when infected with the virus of ordinary infantile paralysis. Altogether nineteen of the twenty monkeys showed varying degrees of incoordination, and thirteen, including twelve of the nineteen, exaggerated muscular movements or convulsions. On the other hand, fourteen monkeys showed paresis or paralysis, consisting of slight paresis of a limb in three, marked paresis in five and apparent paralysis of a limb or other part in six. In two monkeys ptosis was marked and in one it was slight. Two showed squint. In no instance was the disease ushered in by definite paresis or paralysis of a limb or set of muscles alone and in no instance was paresis or paralysis the dominant clinical feature. The virus of the Australian disease has been conveyed to thirteen sheep, a calf and a yearling foal. A histologic examination of the brains of these animals has shown the same pronounced perivenous cellular infiltration as was seen in the human cases and in monkeys.

National Medical Journal of China, Shanghai

March, 1919, 5, No. 1

Burning of Opium Stocks and Need of Constructive Efforts. W. Lien Teh.—p. 4.
Striped Hamster: New Laboratory Animal. E. T. Hsieh.—p. 20.
Medical History of Korea. O. R. Avison.—p. 24.
Influenza Including Its Infection Among Pigs. J. W. H. Chun.—p. 34.
Albuminuria of Pregnancy. W. E. Libby.—p. 44.
Modern Chinese Anatomist. J. Dudgeon.—p. 50.
Report of Hookworm Infection, Pinghsiang Colliery, Hunan. F. C. Yen.—p. 57. To be Continued.
College of Imperial Physicians in Peking. Wu Lien Teh.—p. 69.
Shanghai's Water Supply and Sanitary Problems Considered by Expert. G. J. Fowler.—p. 72.

Annales de Médecine, Paris

March, 1919, 5, No. 6

*Loose Bone Formation Around Joints with Paraplegia. Mme. Dejerine and A. Ceillier.—p. 497.
*Gastric Fever. G. Etienne—p. 536.
Varieties of Permanent Alteration of Visual Field After Brain Wounds in Occipital Region. M. Villaret and F. Beaulieu.—p. 556.
Uneven Pupils After Trephining. M. Landolt.—p. 566.
Influenza in France in 1918. *Péhu and E. Ledoux.*—p. *579.*

Bone Growths Around Joints in Paraplegia.—Mme. Dejerine and Ceillier call attention to the resemblance between the hypertrophic type of tabetic joint affections and the joint affections with paraplegia from injury of the spinal cord. They found these *para-ostéo-arthropathies des paraplégiques* in 48.7 per cent. of seventy-eight cases of paralysis of the lower extremities, all but one from war wounds of the spinal cord. Their thirty-two illustrations and two other plates explain the trouble as the result of local edema, lowering the vitality of the connective tissue, in connection with the functional irritability of the intermediate grey column under the influence of toxic products. There is isolated bone production; the osteophytes lie separate from the skeletal bones, and these bones and the joint retain their normal outlines. Evidently various spinal diseases, syphilitic myelitis (as in one of their cases), tuberculous meningomyelitis, myelopathic muscular atrophy, and syringomyelia, as well as tabes, are liable to be complicated by development of these osteophytes. No inflammatory symptoms accompany them. They may develop around more than one joint, and the movements of the joint are not impaired. The men whose paraplegia was improving and who were able to use their legs more or less, never developed these osteophytes. If the paralytics with osteophytes were able to walk about, there might be fractures, etc., as with tabetic joint disease.

Gastric Fever.—Etienne relates that a fever of short duration with mild gastro-intestinal derangement, what he calls *embarras gastriques fébriles*, was comparatively common in the advanced infirmary in his charge. This febricula has been ascribed to indigestion, chilling, etc., but in seven typical cases he was able to cultivate typhoid or paratyphoid bacilli from the blood during a relapse. Agglutination was at 1:50 or 1:20. In other cases, other microbes were responsible. He only encountered one case in which the colon bacillus could be cultivated from the blood. This typhoidal gastric fever is not an attenuated form of typhoid fever; it is distinguished from the latter by the usual sudden onset, the lack of rose spots, and even of much depression and of diarrhea. It is an attenuated gastro-intestinal infection with a brief phase of septicemia, but liable to relapses and recurrences. Whatever the germ involved, this gastric fever or febricula ranks with catarrhal jaundice and toxi-infectious gastroenteritis.

Archives de Médecine des Enfants, Paris

April, 1919, 22, No. 4

*Serodiagnosis of Inherited Syphilis. H. Barbier.—p. 169.
Typhoid in Infants. J. Crespin and B. Saracino.—p. 183.

Serodiagnosis of Inherited Syphilis.—Barbier has been making a special study of atrophy in nurslings during the last fifteen years, and reports a positive Bordet-Wassermann reaction in 33 per cent. of ninety-three infants with atrophy. A number of others were certainly syphilitic, so that the proportion was at least 42 per cent. In 11 per cent. there was an unmistakable tuberculous taint. Atrophy from improper or inadequate feeding can be effectually combated by regulating the diet, but these inherited taints call for specific treatment besides. Some of the infants begin to thrive when mercury is given; others are unable to bear it. In any event, he warns that it should be given very cautiously, in minimal doses.

Archives Mens. d'Obstét. et de Gyn., Paris

Oct.-Dec. 1918, 7, No. 10-12. Pub'd March, 1919

*Double Solid Uterus. S. A. Gammeltoft.—p. 285.
Case of Congenital Tuberculosis. E. Chomé.—p. 294.
*Genital Prolapse. S. Mercadé.—p. 306.
Obstetrical Practices in Armenia. Ketenetjian.—p. 316.
Chimpanzee Born in Captivity, in Cuba. L. Montané.—p. 323.

Double Solid Rudimentary Uterus.—Gammeltoft operated in the two cases he reports, and compares them with seven similar cases he has found in the literature. In three other cases on record the deformity was unilateral. In all but one of the total cases the women complained of abdominal pains at monthly intervals. The idea that the pains in these cases originated in the uterus is of recent date. Formerly the operation was done on the ovaries, but in the later cases the uterus was removed, leaving the ovaries if they seemed to be sound, and this is the logical and safest treatment.

Operative Treatment of Genital Prolapse.—Mercadé presents arguments to prove that the first degrees of genital prolapse are due to muscular degeneration of the anterior segments of the levator ani muscles. Hence treatment must be directed to overcome the effects of this degeneration. This can be done by suturing the two muscles together on the median line, leaving only room enough for the passage of the urethra. All his patients treated by this technic have been permanently cured. He cannot understand why others address their operative measures to the region at the back of the vagina, when the sagging of the bladder is always the first step in genital prolapse. He cuts out a large lozenge-shaped piece in the anterior wall of the vagina, and separates the bladder from the vagina and uterus, working with bistoury and fingers along the natural lines of cleavage. He does not tampon the vagina nor constipate the woman, but purges the third day, removing the threads the tenth day. Even a retention catheter was not needed in his cases, but he used the catheter the same evening and again the next day if necessary. In one case with an elongated cervix, 8 cm. long, he corrected the prolapse before amputating the cervix. Even if the uterus should have to be removed on account of the prolapse, he still would complete the operation with this suturing together of the levator muscles.

Bulletin de l'Académie de Médecine, Paris

March 11, 1919, **81**, No. 10

*Compulsory Notification of Tuberculosis. Committee Report.—p. 264.
*Respiratory Insufficiency and Large Ventricles. P. Merklen and Chuiton.—p. 280.
*Tubercle Bacillus and Oospora. A. Sartory.—p. 281.
*Accidental Falls in Permanently High Blood Pressure. H. Vaquez.—p. 283.
*Uneven Pupils in Syphilis. E. Sergent.—p. 284.
Instrumental Orthopedics. G. Bidou.—p. 286.

Compulsory Notification of Tuberculosis.—Summarized in Paris Letter, p. 1173.

Respiratory Insufficiency of the Apex.—Merklen and Chuiton warn that the diameters of the heart ventricles should be recorded as well as the lung findings in dubious cases. Moderate hypertrophy of a ventricle may reduce the respiratory capacity of the apex, and explain certain cases with dyspnea and pain in the chest after exertion, with lassitude and modified vesicular murmur. Examined from the rear, the findings are modified or disappear altogether.

Tubercle Bacilli and Acid-Resisting Oospora.—Sartory cultivated from the sputum or urine an acid-resisting oospora which deceptively simulated tubercle bacilli on fragmentation.

Accidental Decline in Blood Pressure with Permanent Hypertension.—Vaquez cites some instances of a temporary or permanent drop in the blood pressure with permanently high tension. The findings then are misleading if the previous state of the tension is not known. Typhoid fever, pneumonia and influenza often reduce the blood pressure. In one case of pneumonia the pressure fell from 240 to 160 mm. and never returned quite to its former figure. In the course of fulminating cerebral hemorrhage in one case the pressure dropped from 270 to 160 mm. Study of such cases apparently demonstrates that the hypertension is primary and independent, at least at first, of any organic lesion. It seems to be due to some functional disturbance in organs which regulate arterial pressure. The diseases which are most readily accompanied by a drop in blood pressure are the ones in which suprarenal insufficiency is common.

Uneven Pupils in Syphilitics.—Sergent warns that a pleuritic process at the apex is liable to modify the pupil in syphilitics.

Bulletins de la Société Médicale des Hôpitaux de Paris

Jan. 31, 1919, **43**, No. 4

*The Leukocytes in Influenza. G. Lion and A. Crétin.—p. 51.
*Pathology during the German Occupation of Lille. G. Lemoine.—p. 56.
Etiology of Influenza. J. Paraf and A. Goubault.—p. 63.
*Meningococcus Carriers. H. Stévenin.—p. 66.
Syphilitic Facial Paralysis. A. Thibault and E. Schulmann.—p. 68.
Gangrene of Scrotum from Anaerobic Infection. Id.—p. 70.
*Muscle Signs of Sciatica. Chiray and E. Roger.—p. 73.
Serin and Globulin Content of Normal and Syphilitic Serum. L. Bory and B. Guérithault.—p. 82.
*Fatal Arsenical Poisoning from Arsphenamin. L. Bory.—p. 84.
Uncomplicated Influenza. G. Blanc and J. Pignot.—p. 87.
Hospital for Tuberculous Soldiers in Heart of Paris. P. Claisse and Stettiner.—p. 92.
*Sudden Death in Football. R. Tricoire.—p. 98.

The Leukocytes in Influenza.—Lion and Crétin examined the blood in nineteen cases of influenza at the height of the October-November epidemic, and found a constant myelocythemia. This seemed to be the consequence of a primary localization of the agent causing the disease; it was found in the mild as well as the severe cases.

Conditions at Lille During the German Occupation.—Lemoine passed through the German occupation of Lille and was impressed by the modifications of the medical pathology of the region. Tuberculosis became very prevalent, and in 1917 there was an actual epidemic of glandular tuberculosis, mostly of the neck, but the sternum and ribs soon became involved, and tuberculous peritonitis became very prevalent. Lemoine is inclined to ascribe this epidemic of different forms of tuberculosis to the lack of mineral salts in the food, the deprivation of green vegetables and the poor quality of the scanty food in general. Scurvy prevailed at times, but the food commission succeeded in arresting it by obtaining lemons from Holland which were placed freely at the disposal of the populace. There were numerous cases also of peripheral neuritis, and cases of pellagra also developed. There were also two waves of dysentery, but no antidysentery serum was available; the Germans finally supplied a small amount. Every one lost weight during the German occupation; the loss of 20 to 25 kg. was the regular thing in adults. Nine tenths of the inhabitants did not eat any meat for two and a half years. The American food commission saved the population of the occupied region from completely disappearing, and they did all they could, with indefatigable zeal, to give the hungry people all in their power in the way of food, but their efforts, he says, were always *contrariés* by the German authority. The municipality also maintained a committee which bought in Holland all the Germans would allow it to buy. The efforts of the two commissions were unable to provide ever more than 1,450 calories for the average daily ration, according to scientific estimates.

Meningococcus Carriers.—Stévenin relates that in making 652 examinations for carriers in a meningitis environment, 11 per cent. of the men were found to be carriers. Also 12 per cent. carriers were found in 2,844 examinations in environments quite free from meningitis, and 7 per cent. in 333 examinations of groups of about twenty men from scattered environments. Not one of the healthy carriers was known to have transmitted the disease although they were kept under supervision for months.

Atrophy, etc., of the Muscles with Sciatica.—Chiray and Roger refer to the atrophy, the exaggeration of the idiomuscular contraction and the electric contractility which are liable to be encountered with sciatica. This *syndrome musculaire de la sciatique* is extremely variable, which is remarkable when we consider the uniformity of the sensory disturbance. This indicates that the seat of the mischief is at the point where the the motor and sensory fibers run separate, that is, at the roots. It has been found further that in more than half the cases the cerebrospinal fluid has a high albumin content, with lymphocytosis and sometimes a positive Wassermann reaction. All this testifies to some inflammatory reaction in the meninges preceding or following the inflammation of the roots, as the cause of sciatica in the majority of cases. The muscular anomalies form an integrant part of sciatic neuritis and sciatic neuralgia, which differ only in degree.

Fatalities from Arsphenamin.—Bory reports a case of typical arsenical eclampsia developing the fourth day after the fourth injection of French arsphenamin, with an epileptiform attack, coma with mydriasis, stertor and death. Two similar cases have occurred recently at the center at Troyes in the last six months, and he cites ten other fatalities of the same nature which he has found recorded in recent reports from different centers.

Sudden Death in Football.—The only pathologic finding at necropsy was dilatation of the macroscopically sound heart, and the large thymus. The man of 22 fell suddenly stricken, like the Marathon runner.

Journal de Médecine de Bordeaux

April 10, 1919, **90**, No. 7

Epithelioma on Site of Old Traumatic Osteitis of Tibia. L. Verdelet. —p. 127.
Parotitis. H. Mallié.—p. 128.
Importance of Coprology for Practitioner and Surgeon. D. Dargein. —p. 130.
Impressions of French Medical Mission in Russia. P. Piétri.—p. 133.

Presse Médicale, Paris

March 24, 1919, **27**, No. 17

*Dulness in the Axilla with Disease in the Pleura. G. Mouriquand. —p. 149.
*Chronic Intestinal Stasis. V. Pauchet.—p. 151.
Recent Experimental Research on Lymphocytosis and the Roentgen Rays in connection with Cancer. J. Luzoir.—p. 152.
Abortive Phenol Treatment of Furuncles. A. L. Soresi.—p. 154.

Dulness in the Axilla.—Mouriquand gives illustrations to show the characteristic information to be derived from percussion and auscultation of the axilla in pleurisy and pneumonia as well as in chronic processes in pleura or lungs. In over a thousand cases examined, when there was accompanying posterior dulness in the chest, dulness in the axilla in at least 75 per cent. of the acute and subacute cases was explained by the presence of an effusion. When the dulness was below the axilla, this was the finding in about 50 per cent. of the cases. Dulness in or just below the axilla should therefore turn the scale in favor of exploratory puncture, thus permitting an early cure.

Pathogenesis of Chronic Intestinal Stasis.—Pauchet refers to Arbuthnot Lane's clinical picture of chronic stasis. He declares that the roentgen and operative findings in such cases show that it can be explained by physiologic and mechanical factors, alone or together. The vicious functioning probably precedes the kinks or partial strangulation, and in the functional cases, without permanent constricting bands, it may be possible to correct conditions by physical culture, massage, the rational use of purgatives and possibly organotherapy, although he asks parenthetically "Which?" When the intestine has had to be short circuited, the results to date have been very encouraging. In conclusion Pauchet warns that we must not be in too much of a hurry to diagnose chronic appendicitis, adnexitis or gallbladder mischief, enteritis, latent tuberculosis or neurasthenia when confronted with a case of general autointoxication or dyspeptic or other abdominal phenomena. We should examine the patient with the roentgen rays every twelve or twenty-four hours until the bismuth suspension has passed entirely out of the small intestine, the cecum, the colons and the rectum. Any delay in the passage of the feces should be carefully noted. One radioscopy is not enough; three or four radioscopic examinations are necessary to diagnose correctly chronic intestinal stasis.

March 27, 1919, **27**, No. 18

*Lamblia Enteritis. M. Labbé.—p. 161.
Parallel Between Puerperal and Surgical Infections. V. Wallich.— p. 162.
*Exophthalmic Goiter and Ovarian Insufficiency. A. Tilmant.—p. 164.

Lambliosis.—Labbé reports experiences which confirm that the lamblia is capable of inducing grave and rebellious intestinal disturbances. The chronic enterocolitis is not in itself very severe, but the general health suffers profoundly and tuberculosis may be suspected. The onset is usually insidious, and the lambliosis is harder to cure than amebiasis. Emetin, arsphenamin, none of the drugs tried displayed any efficacy.

Exophthalmic Goiter and Ovarian Insufficiency.—Tilmant describes a family in which of the 17 members, 57 per cent. of the 7 men and 70 per cent. of the 10 women have goiters. In 6 of the women symptoms of exophthalmic goiter developed as the menopause became installed or the ovaries became insufficient from other cause. In all of the women the goiter subsided temporarily during their pregnancies. One of the sons, who had a goiter, married his cousin who already showed signs of hyperthyroidism, and their three daughters have developed exophthalmic goiter but their three sons seem to be sound.

Correspondenz-Blatt für Schweizer Aerzte, Basel

March 15, 1919, **49**, No. 11

*Cesarean Section for Hemorrhage. K. Brunner.—p. 321.
*Epilepsy. M. Tramer.—p. 328. Conc'n.

Cesarean Section for Hemorrhage from Vaginal Varices.—Brunner cites statistics which show that hemorrhage from varices in the vagina very often proves fatal: 13 deaths in Wullmer's 15 cases during the pregnancy; 7 in 16 during parturition; Delahousse's compilation of 11 deaths in 30 cases, and Guerdjikoff's 2 deaths in 3 cases. Brunet in a case of bleeding from multiple varices was able to arrest the bleeding by tamponing, but the moment the pressure was removed the blood spurted anew from several points. He delivered the woman by abdominal cesarean section and the varices collapsed by the third day. Brunner reports here a case that resembled this only that the profuse and persistent bleeding came on during delivery, which was impeded by the large size of the child, 4,900 gm. The labia were so edematous and swollen that the ligatures applied pulled out, and the hemorrhage was controlled only by numerous clamps filling the vagina. The woman recovered after abdominal cesarean section and antistreptococcus serotherapy.

Epilepsy.—Tramer compares the clinical course with the necropsy findings in fifty epileptics, expatiating on the anatomic changes in the brain which suggest an explanation for the seizures. He thinks that the marginal gliosis (*Randgliose*) so often encountered comes under this heading, but only when there is another factor superposed, namely, pathologically increased pressure on the brain of longer or shorter duration. Hence the necessity for combating the seizures to ward off the consequent stimulation to further production of the gliosis. In some of the epileptics marked changes were found in the Betz' cells in the central convolution, and the clinical course in these cases had been more of a spastic paresis type. Other anatomic findings seemed to correspond to the cases of a myoclonus or paramyoclonus type. The prognosis with epilepsy depends on whether the psychic or psychopathologic condition is secondary to the epilepsy or merely combined with it. Epileptic secondary dementia is characterized by impairment of the memory, retarding of mental and physical processes of association, and intense emotional instability.

March 22, 1919, **49**, No. 12

*Hernia in Appendicectomy Scar. P. F. Nigst.—p. 353.
*Chenopodium Poisoning. P. Ryhiner.—p. 360.
*Otitis in Influenza. Farner.—p. 365.

Hernia in Appendicectomy Scar.—Nigst had hernia develop in fourteen of 117 drained appendicectomies. The tendency to hernia seems to be less with the McBurney technic and when the lips of the wound were sutured with absorbable material in tiers, close up to the drain tube. He warns expressly against parallel incisions, which are necessary when the incision is too close to Poupart's ligament. In dubious cases it is better to drain than not, as these cases heal with less tendency to hernia.

Chenopodium Poisoning.—Ryhiner reports three cases of serious chenopodium poisoning encountered in the last three years, two of them terminating fatally. The patients were children between 2 and 7; the one that recovered was a girl of 2½. This latter child was given 5 drops of chenopodium oil three times, with an hour interval and, two hours after the last dose, a tablespoonful of castor oil. The whole was repeated the second day, and sixteen ascarides were passed within four days. As the child still complained of abdominal pain, the vermifuge was given again a week later; two doses of 8 drops with two tablespoonfuls of castor oil were given on two following days. Three days later the symptoms of severe poisoning developed suddenly and it was over a week before the child recovered. In one of the fatal cases the dose had been three times 10 drops of chenopodium oil with one hour interval, followed by not quite 1 gm. castor oil. The child vomited an hour later. The next day the course was repeated but there was no stool or urine and the child died the following morning. The third case was the druggist's mistake, 5 gm. doses being dispensed instead of the 5 drops ordered. Ryhiner emphasizes that chenopodium oil is an excellent vermifuge but the doses usually given are needlessly high. His own practice is to give two doses of as many drops as the child is years old, with an hour interval, following in two hours with a purge. If this does not work in two hours he repeats the purge. Vigorous purging is indispensable. The manifestations of the poisoning are somnolency, passing into profound coma, clonic convulsions and facial paralysis on one side, screaming, horizontal nystagmus, loss of reflex action, and death from arrest of respiration.

Otitis in Influenza.—Farner reports 115 cases of influenza otitis. They formed about 3.5 per cent. of the cases of influenza at one emergency hospital at Zurich.

Deutsche medizinische Wochenschrift, Berlin

Jan. 16, 1919, **45**, No. 3

*Preventive Vaccination Against Typhus. Otto and Rothacker.—p. 57.
*Recent Progress in Study of Malaria. M. Mayer.—p. 59.
*Urobilinogen with Gastric Cancer and Anemia. H. Scholz.—p. 62.
*Nutritional Disturbances in the Myocardium. T. Büdingen.—p. 64.
Influenza. G. Hoppe-Seyler.—p. 67.
Apparatus for Artificial Pneumothorax. K. Henius.—p. 69.
*Biologic Treatment of Ozena. K. Wittmaack.—p. 70.
Latent Infection. A. Loeser.—p. 72.
*Tuberculin in Diagnosis. H. Bergmann.—p. 73.
Turpentine in Treatment of Gonorrhea. Pürckhauer.—p. 74.
*Etiology of Rheumatic Iritis. M. Folman.—p. 75.
Treatment of Phlegmons with Tincture of Iodin. W. Feilchenfeld. —p. 76.
Hot Water Splint for Sciatica. A. Sasse.—p. 76.
*A State Medical Service. Kollwitz.—p. 77; Comment, J. Schwalbe. —p. 78.

Vaccination Against Typhus.—Otto has been testing a vaccine against typhus since April, 1917, and has vaccinated 750 persons. The vaccine was prepared from the blood of typhus patients at the height of the disease or early in convalescence. It seemed to be perfectly harmless but did not protect against the infection. However, the disease ran a decidedly milder course in the vaccinated than in others.

Malaria.—Among the lessons learned from the war experiences, Mayer remarks, is that the normal incubation period with malaria is ten or twelve days, but it may be much longer. He has seen it up to a year and a half. Malaria is a chronic disease with a tendency to relapses under any treatment. In some years, however, it seems to become spontaneously extinct but otherwise lasts one, two or three years. As a rule, 1 gm. may be accepted as the minimal daily dose. The prolonged use of quinin may induce symptoms of toxic action, eruptions, eczema and diffuse edema, sometimes with hemorrhages in skin and mucosa and even severe intestinal hemorrhage. Blackwater fever is still a mystery; in one case it was brought on by roentgen exposures of the spleen. Provocative procedures interfere with the self-healing processes, he says, and should be restricted to latent cases. As anopheles abound in Germany, infection has already occurred at numerous points and it is important to have the men with a history of malaria kept under supervision in their home towns.

Urobilinogen in Differential Diagnosis.—Scholz regards the amount of urobilinogen in stools and urine as an index of the destruction of the blood that is going on. It can be determined by the colorimeter or by a spectrophotometric technic. Salomon and Charmass have recently asserted that with pernicious anemia the content of urobilinogen in the stools is two or three times the normal amount, while with gastritis, gastric or bowel cancer the content is only a half or a third of the normal figure. Scholz found in thirteen gastric cancer cases that in eleven the content was materially reduced, confirming their statements, but in the two other cases the findings were conflicting. The findings in his three cases of pernicious anemia were also conflicting. The urine findings also proved undependable, even with metastasis in the liver.

Nutritional Disturbances in the Myocardium.—Büdingen recalls that experiments on the surviving heart have shown that sugar in the blood is the main nutriment and source of energy for the heart muscle. His own research has demonstrated further that a deficit in the blood sugar is liable to entail serious disturbance in the growth and actual functioning of the myocardium, a hypoglycemic cardiodystrophy. This result of absolute or relative hypoglycemia may accompany heart disease. The clinical manifestations are a sensation of oppression or pain in the heart region, with or without radiating pains, these disturbances coming on with or increased by exercise, the only objective findings being sometimes faint sounds at the base. In the elderly it is impossible to distinguish the findings with hypoglycemia from coronary sclerosis. The blood sugar content threw light on three otherwise inexplicable cases of sudden death with heart of normal size, the patients' complaints having been ascribed to hysteria or neurasthenia by the physician. When digitalis acts effectually, this hypoglycemic cardiodystrophy can be excluded. But when the usual remedies fail, and the sugar content of the blood has dropped low and disturbances are noted while the sounds at the base grow fainter, then the system is clamoring for grape sugar, and when this is supplied, all returns to normal once more. Sugar given by the mouth is not reliable for the purpose; he infuses a highly concentrated solution of grape sugar, requiring the patient in serious cases to stay in bed. He never attempts the infusion in the office or home. In his over 5,000 infusions by the vein he has never seen any lasting harm result, while his observation of the results has convinced him that we might be able by this measure, taken in time, to overcome or ward off toxic-infectious injury of the heart. Of course coronary sclerosis is irreparable, but the fatal termination is generally due to intercurrent functional factors, and these we may be able to keep under control by therapeutic action on the disturbed internal workings of the heart. In hundreds of cases, he has witnessed permanent benefit, essential improvement in the general physical capacity and in the heart capacity, with relief from disturbances and from the need of drugs, even in advanced cases of coronary sclerosis, with this hypoglycemic cardiodystrophy. Even without this latter, convalescents from infectious diseases with extrasystoles, etc., benefited by the sugar treatment. He usually begins with a 10 per cent. solution and increases the concentration as he proceeds, and gives two or at most three infusions during the week, except in pneumonia or septic fever when a daily infusion may be called for. He usually infuses about 200 c.c. of a 10 or 20 per cent. solution of grape sugar. Bang has demonstrated that 90 or 95 per cent. of the infused sugar vanishes almost instantaneously from the circulation; it is evidently taken up greedily at once by the heart, liver and muscles. Büdingen has been preaching this "sugar treatment" of the heart since 1913 as The Journal mentioned then.

Biologic Treatment of Ozena.—Wittmaack ascribes ozena to the lack of the normal ciliary movements which have been lost by some inflammatory process and consequently the physiologic cleansing mechanism has been destroyed. To remedy this, he diverted the outlet of the parotid gland into the maxillary sinus so that the saliva passed from this sinus into the nose, thus laving the nasal mucosa constantly. As soon as this occurs, the ozena begins to subside without any other treatment and is soon completely cured. The operation begins with the Caldwell-Luc radical operation on the maxillary sinus, and with bilateral ozena has to be done on both sides. In his latest case he did it all at one sitting under local anesthesia. The interval since in his first case is now eight months, and the cure has been complete and permanent. The drawback to the method is that during chewing the flow of saliva is so profuse that some may drip from the nose. The patient has to choose between this and his ozena, and all his five patients have been more than satisfied with the outcome, especially as the secretion of saliva seems to grow less with time. The ozena in each case had resisted all kinds of treatment for years.

Tuberculin in Diagnosis.—Bergmann argues that it is possible with the tuberculin test to distinguish between inactive tuberculosis which is on the point of flaring up and tuberculosis which is slumbering. For example, a man with indecisive lung findings has slight fever. If the titrated skin tuberculin reaction is positive, then he had better be kept under close observation. If it is negative, then the fever must be due to other causes.

The So-Called Rheumatic Iritis.—Folman regards it as significant that in 47 per cent. of his ninety-three cases of supposed rheumatic iritis, there was a history of gonorrhea, and probably the proportion was still higher in reality. This suggests possible advantage from antigonococcus vaccine in treatment of severe and recurring cases of iritis.

The Medical Profession in the Service of the State.—Kollwitz is a "sozialdemokrat" and this address was delivered at a meeting of the Verein sozialdemokratischer Aerzte at Berlin. He comments on the anomalous position of physicians in our present civilization, saying "This anomalous position has been a brake on the wheels of progress of social hygiene. An actual universal hygienization of a people requires as its first prerequisite that the practice of medicine should become a state service." His plan is that physicians are to be given the choice of private practice or of entering the service of the state. The state physicians would have the eight hour day, and an office building would be supplied by the state, like the postoffice and school buildings, where physicians and specialists would serve in turn in three day and night shifts, with provision for bedside calls. . . . "The confidence which the sick man feels in his special physician would soon come to include the entire unit in the community office building, when he found that he was being cured." Schwalbe comments on this, as follows: "Sozialdemokratie is supposed to be the most radical champion of freedom, but in reality it is exactly the reverse. In no other political system would the individuality be so restricted, and initiative so crushed out. With the physician serving only an eight hour day, if a patient seen early in the day grew worse toward night, he would have to have another physician call on him. The state employed physician would have no independence; once embarked on this current he could not go back." Kollwitz expressed his conviction that a socialistic society would treat the medical profession with more consideration and justice than it has been accorded hitherto, but Schwalbe comments that experiences with the sickness insurance societies, which are sozialdemokratisch, show that exactly the reverse may be anticipated.

Jan. 23, 1919, **45**, No. 4

*Sinusitis in Influenza. E. Fraenkel.—p. 89.
Influenza Epidemic. A. Hoffmann and E. Keuper.—p. 91.
Factitious Neurotic and Psychotic Conditions. A. H. Hübner.—p. 95.
To Avoid Reamputation. C. Pochhammer.—p. 97.
*Acute Nephritis without Albuminuria. H. Davidsohn.—p. 98.
Examination of Urine Sediment. H. Egyedi.—p. 100.
Rapid Stain for Malaria Parasites. G. Bruckner.—p. 101.
Retention Stomach Tube in Successful Treatment of Fresh Caustic
Injury of Esophagus in Child of Four. F. Bonhoff.—p. 102.
*Roentgen Treatment of Jacksonian Epilepsy. O. Strauss.—p. 103.

Sinusitis with Influenza.—Fraenkel remarks that the publications on the brief wave of influenza in July and the furious flood in October and November all coincide in the main particulars, but he has not happened to see any account of sinusitis. Among 400 influenza cadavers, he sought in sixty for evidences of disease in the accessory nasal cavities, and in these sixty cadavers the sinuses were found pathologic in 75 per cent. He does not know of any other acute infectious disease that involves the sinuses to such an extent. In 146 other cadavers he found evidences of sinusitis in less than 50 per cent.

Acute Nephritis Without Albuminuria.—Davidsohn describes in detail three cases in which a focal glomerular nephritis was accompanied by quantities of formed elements in the urine but no or slight and transient albuminuria. Oliguria was constant but never very pronounced. In two of his cases hematuria for three or four days was the first symptom, and one patient had colic-like pains. As every acute nephritis may run into a chronic form unless it gets proper treatment, the importance is obvious of not overlooking the nephritis in cases of this kind without albuminuria.

Radiotherapy in Epilepsy.—Strauss reported in 1913 that he had succeeded in improving conditions in epileptics by roentgen exposures. The war interrupted this work, but he has recently resumed it, and now reports a remarkable case of improvement under this treatment. The young woman had had severe epileptic seizures on the right side and both sides of the face, with frequent loss of consciousness, since the age of 3. At 11, the cramp center for the right arm was excised. After this the arm was paralyzed but the seizures were milder and less frequent for a time. At 22 she was having seizures daily, and Strauss applied four erythem doses of hard filtered roentgen rays in four sittings at four weeks' intervals. The region exposed was the left fissure of Rolando. Since then the girl has had no severe seizures, merely occasional slight clonic contractions which are growing less frequent. Strauss believes that the removal of the cramp center was the actual cause of the improvement, but the operation had to be reinforced with the roentgen rays before its full effect could be realized. He adds that his success in this case justifies experiments in this line with epilepsy following war wounds of the skull.

Schweizer Archiv f. Neurol. und Psychiatrie, Zurich

1918, **3**, No. 2

The Inaptitude for Neuralgia in the Last Five Sacral Roots. C. Odier.—p. 185. In French.
Musical and Transcortical Aphasia. G. Mingazzini.—p. 210. In Italian.
Results of Direct Application of Curare to Different Parts of the Cerebellum. L. Stern and E. Rothlin.—p. 234. In French.
Transitions between Drawing and Writing in the Insane. W. Morgenthaler.—p. 255. In German.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 13, 1919, **40**, No. 21

Case of Branchiogenous Carcinoma. N. La Forgia.—p. 161.

March 16, 1919, **40**, No. 22

Malaria in Istria during the War. M. Gioseffi.—p. 169.
Complications of Penetrating Wounds of the Chest. G. Pisanò.—p. 171.

March 20, 1919, **40**, No. 23

Empyema Complicating Influenza. U. Savaral.—p. 185.

Pediatria, Naples

April, 1919, **27**, No. 4

*Transmission of Smallpox to Fetus. S. Cappellani.—p. 193.
*Congenital Osteosclerosis. G. Di Giorgio.—p. 198.
Study of the Fats in the Stools of Twenty-Three Infants. L. Maccone.—p. 202.

Transmission of Smallpox to Fetus.—Cappellani reports four cases in which the new-born infant developed smallpox showing that it had evidently been infected before birth, while the mother was merely in the phase of incubation. The infants seemed normal at birth, but developed the symptoms of smallpox in five or six days. In another case the mother was healthy but the infant showed fever twenty-four hours after birth, and the next day unmistakable signs of smallpox followed. The mother was revaccinated at once and gave a typical response but showed no signs of smallpox at any time, although smallpox was known in the quarter at the time.

Congenital Osteosclerosis.—Di Giorgio gives illustrations of a girl of 6 and brother of 3 who both present complete ankylosis of both elbows, flexed at a right angle. The father is a man of 70, the paternal uncle of the wife, who was only 15. The Wassermann reaction in mother and children is negative. The deformity is evidently the result of symmetrical chondrodystrophy.

Policlinico, Rome

March 30, 1919, **26**, No. 13

*Cancer of the Breast. G. Egidi.—p. 385.
*Determination of Phosphates. E. Pittarelli.—p. 402.

Mammary Cancer.—Egidi recapitulates the important points to be heeded in amputation of the breast, and gives an illustrated description of Tansini's method for twisting around a flap from the back to repair the gap. Egidi warns that palpation of the tumor must always be done very gently as otherwise cancer cells may be forced into the circulation.

Technic for Determination of the Phosphates.—Pittarelli extols the advantages of his modification of the Mercier-Huppert uranium salts method for determination of the phosphates, and he points out the errors liable with the carmin technic.

Riforma Medica, Naples

March 15, 1919, **35**, No. 11

Draining After Laparotomies. D. Giordano.—p. 206.
Relations Between the Graver Forms of Influenza and Experimental Hypersensitiveness to the Streptococcus Pandemicus. M. Segale.—p. 211.
The Methylene Blue Reaction in Influenza Urine. S. Aradas.—p. 213.
Recent Progress in Chronic Nephritis. G. Moscati.—p. 214.
Osteitis of the Apex of the Petrous Bone. E. Aievoli.—p. 216.

Rivista Critica di Clinica Medica, Florence

March 1, 1919, **20**, No. 9

Epidemiology of Influenza. L. Siciliano.—p. 97.

Anales de la Facultad de Medicina, Montevideo

September and October, 1918, **3**, No. 8-10

*Intestinal Trichomonosis. E. Escomel.—p. 521.
*Coronary Embolism in Infectious Endocarditis. R. Lutembacher.—p. 591.
Conception of Traumatism from Medicolegal Standpoint. S. C. Rossi.—p. 611.
*Iodized Vaccine Therapy of Typhoid in Children. L. Morquio and V. Zerbino.—p. 620.
*Suprarenal Insufficiency in Typhoid. P. E. Nuñez.—p. 648.
*Walled Off Otitis Media. G. Regules.—p. 654.
*Albumin in Cerebrospinal Fluid. A. Prunell.—p. 660.
*Protozoa in Fresh Waters in Uruguay. E. H. Cordero.—p. 668.

Intestinal Trichomonosis.—Escomel's research has confirmed that the trichomonas forms cysts, and that it is liable to induce processes in the liver like amebic hepatitis. Intestinal trichomonosis may assume the form of simple diarrhea or dysentery or both, or a choleriform disease. It may be acute or chronic from the start, or chronic with intermittent acute forms. It may induce inflammation and ulceration from the rectum onward, decreasing in intensity upward. Microscopic examination of fresh feces disclosing the trichomonas may reveal other helminths which should also be expelled. Infection occurs by flies or other insects or from water, possibly from water used on vegetables and fruits. He says that since he demonstrated in 1910 the destructive action in vitro of turpentine on the trichomonas, and applied it in clinical cases, trichomonosis has become an easily curable affection. Under turpentine treatment, he has seen dysentery, intractable for months, subside promptly in two weeks, while three days completed the cure in the recent cases. The urine should be inspected to detect any tendency to drug nephritis. Even if this develops, it is mild and transient, and is extremely rare in the absence of a special predisposition. He starts with a course of iodin treatment. Each night the patient takes an enema of a liter of decoction of krameria or plain boiled water, expelling it at once. Then a second enema is given of 1 liter of spring water in which is dissolved 1 gm. of sublimed iodin, and this enema is also expelled at once. The enema should be given with the patient reclining in bed, lying on the left side. There is some discomfort from the iodin enema but this soon subsides; it can be relieved by hot applications to the abdomen and anus, or a small enema with some sedative may be given and retained. The iodin enema is usually borne well; it is never so painful as a silver nitrate enema. The food should be milk and carbohydrates or the latter exclusively, drinking copiously of rice water, decoctions of acacia and of linseed. Hot applications should be made to the abdomen every two, three or four hours. Repose is useful. The results have been notable in his extensive experience. If any trichomonas are still found in the stools by the fourth day, this indicates that the protozoa have invaded very high regions or are ensconced deep. In this case he institutes a course of turpentine by the mouth or in enemas, alternating the three procedures until the trichomonas and their cysts have completely disappeared. Escomel gives the illustrated history of the biology of the trichomonas and reviews what has been written on the subject by others, with details of the turpentine technic.

Coronary Embolism in Heart Disease.—Lutembacher describes a variety of infectious endocarditis in which the cardiac thrombi are made up almost exclusively of leukocytes, with very little fibrin. As they contain few microbes, they do not induce an inflammatory reaction, but in the skin they may determine a purpuric eruption. His sixteen illustrations are from a case in which the roentgen findings during life were compared with the necropsy findings, an infectious endocarditis having become superposed on an old mitral stenosis.

Iodized Vaccine in Typhoid in Children.—Morquio and Zerbino report disappointing results in treatment of seventy-seven children treated with iodized vaccine made by Ranque and Senez' technic. The vaccine seemed harmless, but no benefit from it was observed.

The Suprarenals in Typhoid.—Nuñez remarks that the suprarenals are involved in typhoid both early and constantly, as a rule. This is the cause of the hyposthenia, the hypotension, the hypocholesterolemia, the dicrotic pulse and the dissociation between the pulse and the temperature. He makes a point of daily subcutaneous injection of epinephrin in every case of typhoid in which one or more of these five symptoms are observed.

Partitioned Off Otitis Media.—Regules' illustrations show that, instead of being general, the inflammatory process may be restricted to some one point in the middle ear, where the pus is walled in. In puncturing, if the needle does not happen to hit this point, the puncture may not give any relief, and this possibility should be borne in mind when relief does not follow promptly on paracentesis. He reports two cases.

Quantitative Test for Albumin in Cerebrospinal Fluid.—Prunell's diaphanometric method was described in these columns, April 19, 1919, p. 1196.

The Protozoa of Uruguay.—Cordero describes, with four plates, fifty varieties of ciliated protozoa found in the fresh waters of Uruguay.

Archivos Brasileiros de Medicina, Rio de Janeiro

January, 1919, **9**, No. 1

*The Hormones and the Vegetative Nervous System. O. Gallotti.—p. 3.
*Metameric Abnormal Contraction and Relaxation. C. C. Da Costa.—p. 10.
Kaolin in Treatment of Cholera. W. Almeida.—p. 23.

The Hormones and the Vegetative Nervous System.—Gallotti argues that the harmonious action of the involuntary organs is due in large part to the hormones influencing the autonomous and the sympathetic nervous system. He reviews the action of the different endocrine glands in turn, saying that the relations between the hormones and the vegetative system must be studied before we can prescribe organotherapy intelligently.

Metameric Dysthenia.—Da Costa discusses the abnormal conditions in regard to contraction or relaxation which are liable to be observed in certain organs belonging to the same metamere. Spasm of the esophagus, of the glottis, and of the vagina displays this metameric character. The uterus can also present circular constriction at any height.

Brazil-Medico, Rio de Janeiro

March 1, 1919, **33**, No. 9

*Beriberi. C. Fraga.—p. 65. Commenced in No. 7, p. 49.
*Regional Anesthesia. J. de Mendonça.—p. 68. Cont'd in No. 7, p. 52.

Deficiency Disease and Beriberi.—Fraga gives the history of the research on beriberi in different countries, and reports some personal research at Bahia. Nine convicts in solitary confinement consented to a dietary experiment and were fed with polished rice or polished plus sterilized rice or sterilized beans. The penitentiary in question has had beriberi endemic in some years and not in others, although the diet is constantly the same. The nine convicts acquired a distaste for this sterilized diet, and it induced digestive disturbances so that the experiment had to be suspended by the thirty-sixth to the thirty-eighth day. No nervous symptoms developed in any of them. Another series of experiments is now under way with another group of convicts in the penitentiary who have been promised pardons if they hold out. They are now at the forty-third day, but still *no nervous symptoms are apparent in any of them.* The experiments with fowls reproduced typical polyneuritis gallinarum. In Brazil, both Allen M. Walcott (The Journal, Dec. 18, 1915, p. 2145) and A. de Assis found it easy to induce this deficiency disease in fowls. Assis induced it with two cereals not previously experimented with elsewhere, namely, the bean *Phaseolus vulgaris* and mandioca, *Manihot utilissima.* Fraga's conclusions are that polyneuritis gallinarum and beriberi in man are quite distinct morbid entities. The cerebellar symptoms in particular distinguish the former exclusively, and this alone would invalidate the generalization of the conclusions from this disease to man. In man, he declares, the dietary deficiency acts merely as a predisposing cause for human beriberi.

Regional Anesthesia.—De Mendonça traces the history of regional anesthesia from the days of myths to the present time, reviewing the various efforts made to induce the deepest analgesia with the minimum of the anesthetic. His conclusions from this analysis and his own experiences with 1,500 operations done under regional anesthesia, emphasize that regional anesthesia, done with procain (novocain) associated with epinephrin, is the greatest progress realized in surgery since the advent of aseptic surgery. Local anesthesia or blocking the trunk nerve, alone or together, suffice for all surgical operations except abdominal operations which require separation of inflammatory adhesions or much manipulation of viscera. To date there has been no fatality attributable to them. Even in the exceptional cases in which they do not suffice, they can be applied advantageously in combination with general anesthesia. For intractable children or very nervous adults it is better to resort at once to general anesthesia. Local anesthesia, with or without blocking the trunk nerve, should always be the preference in all cases of shock, extreme inanition, or with grave lesions of kidneys, liver or lungs.

Medicina Ibera, Madrid

Feb. 15, 1919, 6, No. 67

*Nephritis. S. Pascual.—p. 149. Cont'n.
Iodin in Prophylaxis. A. S. Alvarez.—p. 154.

Nephritis.—In this instalment of his long serial article on nephritis, Pascual discusses pain in the kidney without actual nephritis. Two cases of this nephritis dolorosa are described. The cure was immediate and permanent after decortication and fastening the kidney in place.

Prensa Medica Argentina, Buenos Aires

Feb. 20, 1919, 5, No. 26

*Protective Action of Antiserum plus Leukocytes. A. Bachmann.—p. 253.
*Dystrophy in Infant from One-Sided Diet. J. C. Navarro.—p. 254.
*The Prevailing Epizootic. R. Kraus.—p. 256.
Phenomena Observed when Roentgen Rays Are Passed Through Openings of Special Sizes and Shapes. J. Laub.—p. 256.
*Heliotherapy in Chronic Nephritis. A. Cetrángolo.—p. 257.

Combined Action of Serum and Leukocytes in Experimental Peritonitis.—Bachmann injected antityphoid serum plus leukocytes into the guinea-pig peritoneum and found that, in certain proportions, this mixture seemed to protect the animal against an otherwise pathogenic inoculation of typhoid cultures. There seemed to be an optional curve for the proportions, above and below which there was no protective action.

Starch Dystrophy.—In Navarro's case the 5 months' infant had been fed inadequately and exclusively with cereal gruels. It had not lost much in weight but was much debilitated and had developed a necrotic abscess on the shoulder. This yielded to potassium permanganate at 0.5 per thousand, applied three times a day. The child was fed with breast milk for four days, then skimmed milk and whole milk, and rapidly recuperated.

Epizootic Meningitis.—Kraus relates that last year and again this year there has been an "enzootic meningo-encephalitis" prevailing among horses in Argentina. Nothing pathologic could be found in the organs of the horses, but rabbits injected with emulsions of the brains died with symptoms resembling those of rabies. The brains of the rabbits showed no macroscopic lesions, but proved as virulent for other rabbits as the original emulsion. The passages from the rabbit exclude the assumption of poisoning from food. A gram-negative diplococcus was cultivated from the horse brains. See also Buenos Aires Letter, p. 1309.

Heliotherapy in Chronic Nephritis.—Cetrángolo gives the tracings from two cases of chronic nephritis showing losses of weight from 300 to 1,200 gm. under the influence of heliotherapy, while the peripheral vasodilation relieved the heart of a portion of its work. The minimal arterial tension also declined.

Revista Española de Med. y Cir., Barcelona

January, 1919, 2, No. 7

*Operative Treatment for Gallstones. E. Ribas y Ribas.—p. 1.

Operative Indications with Gallstones.—In Ribas' 116 operative cases of gallstones, fully 50 per cent. never had actual gallstone colic. The diagnosis in many cases was based merely on vague, indefinite sensations, but starting in the subhepatic region. The gallstone itself, as a simple foreign body, never interests the surgeon, merely the consequences from its presence. The clinician likewise is not interested in the expulsion of the stone, but in the condition left afterward. If the gallstone proves to be round and composed of cholesterin, this is an aseptic concretion, and may be assumed to have done little if any damage. The discovery of diverticuli in the walls of the gallbladder has confirmed the general assumption that infection once installed is difficult to dislodge—an additional reason for cholecystectomy. This removes the organ which is the source of gallstone production while the infection responsible for the development of the gallstones has rendered it functionally useless. The horse, the ass and certain other animals have no gallbladder, and experimental research and the clinic confirm that this organ is not necessary to life. In his 27 cases of simple cholecystectomy, one patient with a hydatid cyst in the liver succumbed to pneumonia; the others all recovered; 13 died in the 70 cases with drainage of the hepatic duct. In 10 of these cases the progressive course of the inflammatory process around was responsible for the fatal outcome.

Ribas' experience teaches also that, as a rule, the danger is greater with an extremely acute cholecystitis developing for the first time than with an equally acute flaring up of a chronic cholecystitis. With the latter the walls are thicker and there is less danger of perforation. The form with typhoid is distinguished by the rapid enlargement of the gallbladder accompanied by high fever and local pain. All this may retrogress spontaneously, but if the toxic action is pronounced and it keeps up for several days, in typhoid or paratyphoid, he advises cholecystectomy. He does not approve of palliative operations except for certain rare indications. He gives an illustration of a case in which acute cholecystitis during convalescence from paratyphoid developed fatal perforation under expectant treatment, and describes seventeen different types of chronic gallbladder disease, illustrating specimens, with two colored plates. In one case the liver was completely wrapped around the gallbladder as far as the cystic duct, and adherent.

He has operated in ten cases of subphrenic abscess traceable to gallstones. There is generally a secondary pleuritic effusion just above in such cases and this may mislead the diagnosis. In one case puncture was negative until the needle was inserted on the posterior axillary line, between the fifth and sixth ribs, which opened up a large extraperitoneal abscess between the diaphragm and the rear of the convex surface of the liver. A complete cure was not realized, however, until the gallbladder was removed five months later. There were evidences of pancreatitis in 42 of Ribas' 116 cases, and there was a history of gallstones in 5 of his 12 operative cases of hemorrhagic pancreatitis. He regards cholecystectomy as the surest means to cure pancreas mischief with gallstones. He has had 3 cases of cancer of the gallblader and a stone was found in this organ in one of them.

Revista Cubana de Obstetricia y Ginecologia, Havana

January, 1919, 1, No. 1

Plea for More Conservative Management of Gynecologic Disease. F. M. Capote.—p. 7.
Prophylaxis of Puerperal Infection. E. de Aragón.—p. 15.
Bilateral Urinary Calculus. J. A. Presno y Bastiony.—p. 21.
Fetid Leukorrhea. M. C. Latatú.—p. 32.

Revista del Instituto Bacteriologico, Buenos Aires

November, 1918, 1. No. 5

Influence of Snake Venom on Coagulation of Blood. B. A. Houssay and A. Sordelli.—p. 485; Id. and J. Negrete.—p. 565.
Research on Physiologic Action of Ergot of Cortaderia Dioica. B. A. Houssay and E. Hug.—p. 617.

Revista Medica del Rosario

March, 1919, 9, No. 1

*Specific Phagocytosis in the Immunized. A. Bachmann.—p. 1.
*Epicondylalgia. J. M. Maidágan.—p. 24.
*Mastoiditis in Infants. M. Steinsleger—p. 29.

Phagocytes in Immunity.—Bachmann is professor of bacteriology at the University of Buenos Aires, and he states: "The series of experiences here described have demonstrated for the first time the presence of some special substance in the leukocytes of immunized animals. The presence of this substance renders these leukocytes better fitted than others to contend with the infection. This *anticuerpo leucocitario* is found only in small amounts in the leukocytes. This is explained by the assumption that, being an element of living cells, it is reproduced in proportion as it is used up. The existence of this substance throws light on certain phenomena which have been hitherto obscure." He analyzes these phenomena in detail, adding "The antibodies and the serum, etc., are the vanguard, and these alone may in favorable cases, arrest the microbian infection; but the really effectual fight is that waged by the leukocytes, but the leukocytes do not interfere in this way until the humoral antibodies have failed." . . . "The phagocytes from immunized animals display this new property even in vitro—a specific phagocytosis."

Epicondylalgia.—Maidágan cured a typical case of epicondylalgia in a boy of 12 by immobilization of the arm in semiflexion, leaving an opening in the dressings through which the region of the elbow was painted with iodin on alternate days. At the end of two weeks the elbow was lightly massaged and exercised and by the end of the month the pains and functional impotence were entirely overcome, and the cure has been permanent.

Mastoiditis in Infants Without Otorrhea.—Steinsleger has had to operate for mastoiditis in nine cases in young infants and there was no otorrhea in 77 per cent. in this group. One infant was only 45 days old, and the otitic origin of the mastoiditis was rendered evident by perforation of the mastoid on the seventh day of the abscess. In two cases an incision had to be supplemented later with the radical operation before a cure was realized. Mastoiditis in young infants seems to be relatively benign, and the child seems to bear it remarkably well. But this does not justify half-way measures; the results of such are deplorable. He never encountered any remote complications in young infants such as he has witnessed in older children. In the infants there was always caries of the mastoid process, and the operation was thus facilitated. Physicians should be on the alert to detect otitis in infants as it is much more frequent than generally imagined.

Revista de Psiquiatria, Lima

January, 1919, 1, No. 3

Polyneuritic Psychosis. M. G. Olaechea—p. 133.
Mental Disturbances in Malaria. C. A. Bambaren.—p. 137.
Psychologic Psychiatry. H. F. Delgado.—p. 146.

Semana Medica, Buenos Aires

Jan. 30, 1919, 26, No. 5

Retrohepatic Dulness in Typhoid. M. E. Pignetto.—p. 105.
Internal Genital Aplasia. C. Lanza.—p. 107.
Localization of Oval Foramen. A. Sacco.—p. 113.
Paraffin Atomizer. J. M. and M. E. Jerez.—p. 126.

Feb. 6, 1919, 26, No. 6

*Infant Feeding and Diarrhea. J. C. Navarro.—p. 131.
Topography of the Oval Foramen. A. Sacco.—p. 133.
*Optic Neuritis with Thyroid Insufficiency. J. C. M. Fournier.—p. 139.
Shower Baths and Swimming Pools in Schools. E. R. Coni.—p. 145.
Film Treatment of Varicose Ulcers. A. Ullio.—p. 146.
Progress in Public Health. E. R. Coni.—p. 147; Id.—p. 149.
Limitations of Version with Placenta Praevia. F. Villanueva.—p. 151.

Infant Pathology.—Navarro warns that when the breast-fed infant is not obtaining its due quantum of breast milk, its resisting power is low and it is liable to develop fever with slight infections. The physician not realizing that the child is suffering from inadequate quantities of food is liable to shut off the food still more, and purge. Naturally the fever subsides with inanition, and the assumption is confirmed that the breast milk is the causal factor. Navarro emphasizes that disturbances for which the breast milk is actually reponsible are so rare as to be practically negligible in general practice, so this mistake should not be made. When the breast milk is being given in too large quantities, the disturbance is mild, moderate diarrhea, some vomiting but not severe or frequent, and some discomfort. Inadequate feeding is usually accompanied by vomiting and often with some infections in skin or throat or nose. If possible, a wetnurse giving more milk should be provided. If this is not practicable, cow's milk should be given in addition, modified as indicated. In infants between 1 and 4 months old, the cow's milk had better be given immediately after the child has nursed, to take advantage of the glands' secretions. Infants over 4 months old can have one feeding of cow's milk instead of the breast.

Optic Neuritis with Hypothyroidism.—The neuritis was bilateral in the woman of 24 with signs of mild, chronic thyroid insufficiency during the last seven years except in her three pregnancies. Three months after her last two pregnancies vision became impaired. By exclusion the optic neuritis was ascribed to the thyroid insufficiency and thyroid treatment was instituted. Vision improved essentially under it, but every time it was suspended the visual acuity dropped from ⅓ to ⅙. The optic nerve in the other eye had been atrophied for nearly four years. There was a family tendency to obesity, and the visual disturbance was probably a manifestation of some upset in the endocrine glands. The thyroid treatment aided in restoring the balance to a certain extent, and visual acuity of ⅓ was regained, but it dropped to ⅙ every time the thyroid treatment was suspended for about five days.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

March 1, 1919, 1, No. 9

Medical Education in England. G. van Rijnberk.—p. 649.
*Acute Lymphadenoid Leukemia. J. L. A. Peutz.—p. 655.
The Physician as a State Official. C. J. Brenkman.—p. 664.

Lymphadenoid Leukemia.—Peutz describes a case of acute leukemic lymphadenosis in a boy of 4. He was the ninth among thirteen children, and all the rest were apparently healthy, and he had always been well except that he seemed a little paler than the others. He began to show skin symptoms suggesting Werlhof's disease, followed in two days by hemorrhage from the kidney and enlargement of the spleen and peripheral glands, with death the eighth day. The blood was sterile and there was no fever, but the whites ran up to 720,000. He had had a fall two weeks before the first symptoms, and the shock from this, superposed on the status lymphaticus, may have brought on the disease.

Hospitalstidende, Copenhagen

Jan. 29, 1919, 62. No. 5

*Osteoplastic Resection of the Knee. P. Panum.—p. 129.
*Vertigo. P. Lorenzen.—p. 136.
Carrel-Dakin Treatment Applied to Peace Time Surgical Lesions. P. V. Tuxen.—p. 141.

Osteoplastic Resection of the Knee.—Panum reports the details of three cases in which he applied Iselin's method of correcting ankylosis. A wedge is cut, but instead of removing the wedge it is twisted completely around until its base lies in the popliteal space, and heals in place here. The wedge does not have to be more than half the size of the wedge with resection, but the chief advantage of this technic is that the leg is not shortened by the operation. He makes a point of cutting the tendons preliminary to the resection, saying that in many cases of angular ankylosis the ankylosis might have been avoided if the tendons had been severed at the first resection. When the knee is flexed beyond 45 or 60 degrees it might be possible to apply this technic several times in succession, correcting only a part of the angle at a time. He reiterates that this osteoplastic resection is simple, certain and free from danger. He modified the Iselin technic in three of his six cases, cutting out a supplementary wedge.

Vertigo.—Lorenzen has noticed that dizziness for which the digestive organs are responsible is generally continuous but often with exacerbations in connection with meals, usually soon afterward, and is often accompanied with more or less nausea or other symptom of digestive disturbance. The dizziness experienced in an elevator or in looking down from a height he is convinced is of mental origin. It can generally be banished by seizing hold of something solid. He has encountered a number of cases in which a fibrositic affection in the muscles of the neck caused dizziness on turning to look back or other sudden movement of the head. He explains the mechanism of this dizziness and relates that a few sittings of massage of the fibrositic muscle put an end to the dizziness. In one severe case of the kind, the woman of 55 experienced this dizziness so much and so often that she did not dare to go on the street. Under eleven sittings of massage it disappeared and a few more sittings banished the last trace of the fibrositis. When the latter is of long standing, this cannot be counted on, but temporary relief is always obtained. Correcting digestive disturbance aids materially in the cure, as also measures to soothe the overexcitable nervous system.

March 12, 1919, **62**, No. 11

*Conditions for Danish Science and for International Scientific Research After the War. T. Rovsing.—p. 337.

International Scientific Research.—In this address delivered to Danish students, Rovsing portrayed the opportunities which the present times offer to Denmark to take a leading place in international scientific conclaves. He commented further on the advantages that would accure to all if some one language were to be selected as the official speech for scientific assemblies. "At the present *moment*," he continued, "French stands a better chance for acceptance than any other language. The allied and the neutral countries would probably accept it without protest in consideration of the admiration and sympathy which France has won by its stand during the war."

Ugeskrift for Læger, Copenhagen

Feb. 20, 1919, **81**. No. 8

*Paralysis of Respiration with Brain Abscess. G. V. T. Borries.—p. 325.

Paralysis of Respiration with Brain Abscess.—Borries reports a *personal* case of this kind and analyzes forty-seven he has found on record. It does not seem to be generally known that it may prove possible to resuscitate the patient even with *complete* arrest of the respiration, by immediate incision down to the brain abscess. Artificial respiration is only a makeshift and does not save the patient. There is one case on record in which touching the medulla oblongata with the finger started the breathing again, and this might be tried as the last resource. It acted possibly by releasing the impacted cerebellar tonsil. The Trendelenburg position may aid. Tracheotomy was done in seven cases, but it was probably done from misapprehension of the cause of the apnea. Artificial respiration and immediate incision down to the abscess should be tried in even the most apparently desperate cases. Coma with a brain abscess is no contraindication to the operation. Only in twenty-one of the forty-seven cases was the abscess opened up. The immediate effect of incising and clearing out the abscess was startling. In Borries' case the livid face abruptly changed to the normal tint and spontaneous respiration started up the moment the skull was opened, even before the dura had been incised. Borries' *patient* was a woman of 34 with symptoms of an otogenous cerebral abscess, and the sudden paralysis of the respiration was combated with artificial respiration and an incision in the temporal lobe. The woman began to breathe spontaneously and had no further disturbance in respiration till her death from the effects of the large abscess extending into the occipital lobe, found at necropsy. Borries is inclined to regard circulatory disturbance from some trivial cause as the last straw that upsets the precarious balance of the brain suffering from the compression by the abscess, tumor or accumulation of blood. This sets up a vicious circle. In his compilation of forty-seven cases, the lesion was in the cerebellum alone in thirty-two and in the brain alone in thirteen. The paralysis of respiration followed on lumbar puncture in quite a number of cases. Tabes and various poisons were responsible for it in other cases, and there are undoubtedly many instances of death from stoppage of breathing from an intracranial lesion, without special recognition of this factor.

Feb. 27, 1919, **81**, No. 9

*Circumscribed Edema. N. R. Christoffersen.—p. 381.
German Science Since the Armistice. J. W. S. Johnsson.—p. 408.

Circumscribed Edema.—Christofferson discusses the pathogenesis of Quincke's circumscribed edema, and describes various experiences which, in connection with the "war edema," seem to indicate that the internal secretions have more to do with it than has been suspected hitherto. In a case described in detail the little girl had been having hemorrhagic purpura, and the blood pressure was abnormally high. Transient edema developed in different regions in turn, and a marked tendency to retention of water and salt was evident although there was nothing in heart or kidneys to explain this tendency to edema. In this and other cases in his experience, he never found anything to suggest a peculiarly unstable nervous system.

Upsala Läkareförenings Förhandlingar

July 20, 1918, **23**. Supplement

*Tuberculous Glandular Disease in Relation to Pulmonary Tuberculosis. A. Wallgren.—p. 1.
The Course of Experimental Tuberculosis in Rabbits of Different Ages. A. Wallgren.—p. 127.

Prognosis with Tuberculous Glandular Disease.—Wallgren's *attention* was attracted to the rarity of lymphomas in persons with pulmonary tuberculosis, and to the apparently benign form of the pulmonary processes when they were associated with lymphomas. Examining the records at the Upsala clinic of 526 cases of tuberculous glands given operative treatment from ten to thirty years ago, he was able to trace the history since in 251 cases. Of the 79 with sound lungs at the time of the operation, 63 still are free from pulmonary disease; 9 have pulmonary tuberculosis; 5 had miliary tuberculosis and 2 tuberculous meningitis. Of the 29 with pulmonary tuberculosis at the time, 9 now have clinically sound lungs as also 3 of the 8 suspects. Of the total gland cases, 16.5 per cent. had pulmonary tuberculosis at the time. Of the total 224 traced cases, 3 per cent. had terminated with meningitis and 4 per cent. in miliary tuberculosis. On the whole, the pulmonary tuberculosis in these lymphoma cases seemed to be of a benign form. In 12 cases with a fatal outcome, the interval before death averaged five years; the range was from two to eleven years. Six of the patients were under 16 and only 3 over 30 years old. A number of writers have mentioned that in certain families some members develop pulmonary tuberculosis while others develop only tuberculous adenopathies and the lungs seem to escape. Among 516 tuberculous persons given treatment at the chest clinic at Upsala, only 1.7 per cent. had a history of enlarged and probably tuberculous glands before the onset of the pulmonary process. The general impression from the data presented, including a tabulation of statistics from various foreign clinics, is to the effect that the glandular disease augments the resisting powers, and determines a milder course if pulmonary lesions develop.

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REHABILITATION OF THE DISABLED *

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I. REHABILITATION OF THE WAR DISABLED

The world war has aroused a universal interest in the physical and mental rehabilitation of disabled soldiers. The instruments of destruction of modern warfare sacrificed millions of lives and disabled a multitude of men. To conserve man power it became necessary for the European countries engaged in the war to study and apply all possible measures to protect the lives and health of the soldier. The use by the central powers of offensive and destructive measures in the way of high explosives, poisonous gases, liquid fire and other devices produced injuries requiring special measures of prevention and efficient surgical and medical management which could be developed only after careful research and study.

The final year of the war was illuminated by remarkable results of the practical application of known and new measures of prevention of disease, and military surgery reached a stage of technical skill and efficiency heretofore unknown.

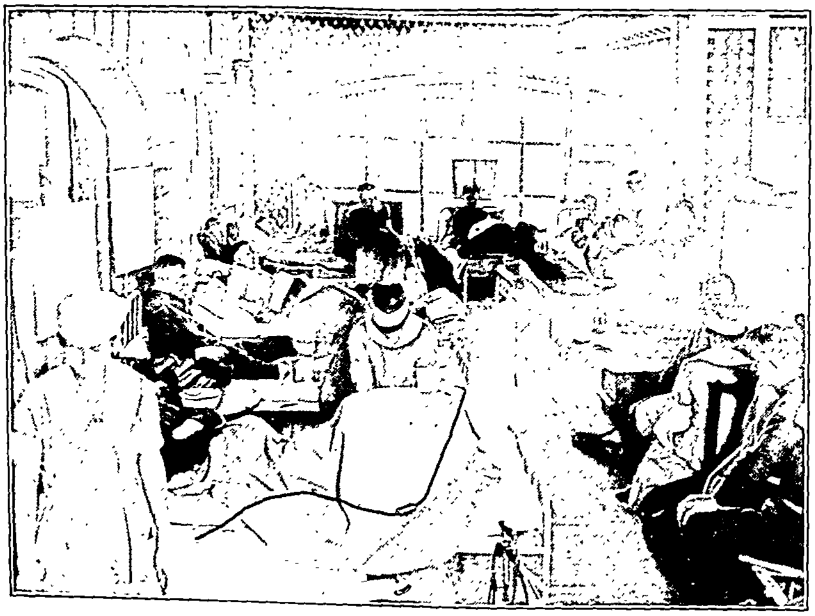

Fig. 1.—Application of thermotherapy.

EUROPEAN METHODS OF REHABILITATION

In addition to ordinary medical and surgical care, all the European countries engaged in the war adopted measures to hasten physical and functional restoration by the application of special therapeutic measures grouped under the heading of physical and mental reconstruction or rehabilitation.

The program of rehabilitation included physiotherapy, embracing hydrotherapy, electrotherapy and thermotherapy; exercise, passive (massage, mechanotherapy) and active (graduated calisthenics and special training, military drill and games in the gymnasium and out of doors); and occupational therapy in the application of manual and mental training and education in wards, workshops and schools and in gardens and fields. For the soldiers still fit for combat or for special military service, convalescent training centers were maintained, where, by means of military drill, instruction in individual and general hygiene, and play, the final hardening and restoration were completed.

All of the Allied countries of Europe together with Canada endeavored to train and educate the soldiers who were so disabled by disease or injury that they were no longer fit for any kind of military service, to qualify them to serve in the civilian industrial army. The rehabilitation program of these countries was carried on through a plan of cooperation of the military and civilian authorities. Limited time and space do not permit one to give here details of the program and the results of rehabilitation of the disabled as practiced by the Allied countries associated with us in the war.

AMERICAN PROGRAM

The United States became engaged in the war so late that our government was able to take advantage of the knowledge acquired by the entente governments by a bitter experience in defensive and offensive warfare, in measures of protection and prevention of injury and death. The Medical Department of our Army shared in the opportunity to apply the newer military medicine and surgery in the prevention and treatment of disease and injury. The program of our government for the care of the soldier and his dependents embraced:

1. The creation of the Bureau of War Risk Insurance, in the Treasury Department, with provisions for voluntary life insurance with the payment of a monthly premium of moderate amount from the soldier's pay;

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* Read before the Institute of Medicine of Chicago, April 19, 1919.

* This article is abbreviated by the omission of some of the illustrations. These appear in the author's reprints.

provision for monthly allotment to the soldier's dependent family and provision for the payment of a monthly pension after discharge for a permanent disability acquired in the line of duty.

2. The Medical Department of the Army was authorized by the War Department to include measures of physical reconstruction in the treatment of the sick and wounded soldiers, including the employment of curative work carried to the degree of prevocational or vocational training and education, to fit them for further general or special military service; or if unfit for further military service to discharge them from the Army after the maximum physical and functional result was obtained.

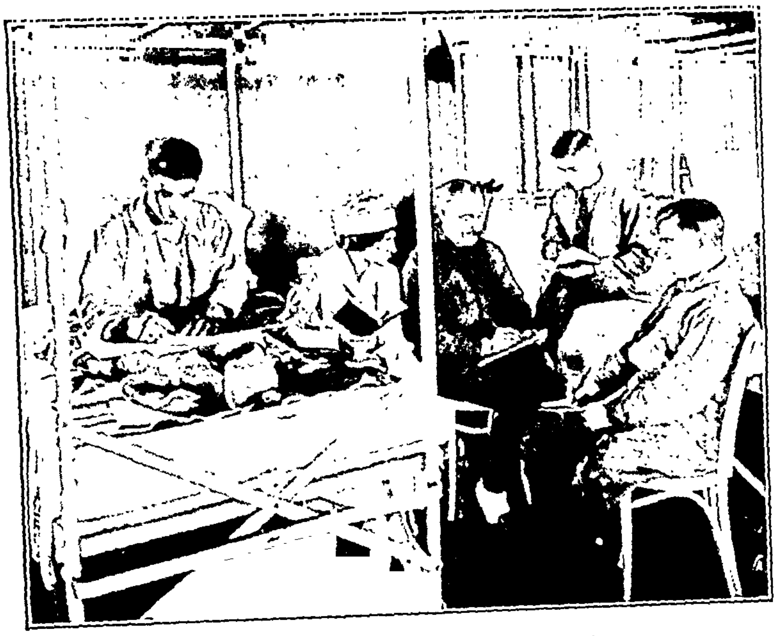

Fig. 2.—Ward class in academic study.

3. The Congress enacted a law approved by the President, June 27, 1918, which made the Federal Board for Vocational Education responsible for the vocational training and education of compensable disabled soldiers after their discharge from the Army.

4. The Congress has provided appropriations and has made the Public Health Service responsible for the hospital care of compensable disabled soldiers who may require treatment after their discharge from the Army.

The policy adopted by the Medical Department of the Army, in the attempt to fulfil its obligations to the government and the soldier, embraced a program of measures of prevention and treatment of disease and injuries, including mental and physical reconstruction or rehabilitation, based on accumulated experience and knowledge.

Advantage was taken of all available knowledge gained by the medical departments of the armies and governmental and other agencies of our Allies. American officers and American hospital units served with the English and French armies before we had developed an army overseas. Hundreds of these medical officers, medical enlisted personnel and American nurses acquired a first-hand knowledge of modern military medicine and surgery, enabling them to give efficient service in our own Army overseas and at home.

ORGANIZATION OF ARMY MEDICAL DEPARTMENT

One of the remarkable developments of the war was the organization of the Medical Department of the Army. Our country was unprepared for war on April 6, 1917. Our Regular Army establishment was efficient but small. The regular Medical Corps numbered less than 500 commissioned officers. As a rule they are a fine and upstanding body of men, many of them well qualified for administrative duty and as surgeons and physicians, a few with world wide reputation in research work and as sanitarians. At the call of the Surgeon-General the medical profession responded by volunteering for service. The large majority of these men were untrained in military tactics and knew but little of military medicine. But among them were many of the best qualified physicians, surgeons and specialists of our country. The majority quickly overcame the handicap of lack of pure military knowledge and gave service at home and overseas which evoked the praise of the chief commander of the American Expeditionary Forces and of the Surgeon-General. Nor must one lose sight of the spontaneous response of the medical profession to the call of the Provost Marshal-General for service on draft boards, and of the efficient manner in which this service was rendered.

DISEASE AND INJURY PREVENTION

The subject of rehabilitation of the disabled soldier involves the application of measures of disease and injury prevention. The principles involved in the problem of disease and injury prevention as applied to our army were made more difficult by many factors. Men were inducted into military service before the training camps were completed; it was practically impossible to place nonimmune suspects in detention quarters for a sufficient period of observation, and infectious disease carriers thus spread measles, scarlet fever and cerebrospinal meningitis among the susceptible troops. The winter of 1917-1918 was characterized by severe cold and much snow, and the newly organized Medical Corps officers were insufficient in number and many were inexperienced at the beginning in how best to deal effectively with the big and difficult problems. In the late summer and fall of 1918 the world wide severe epidemic of influenza reaped an abundant harvest of lives of soldiers and civilians. A malignant type of pneumonia characteristic of all epidemics of influenza was the chief cause of death. To all of these embarrassments in the application of measures of disease and injury prevention must be added the risk of the transportation of a large army in dense concentration by train in the United States and in France, England and Italy, and in equally crowded ships across the ocean. When overseas the soldiers met a trying

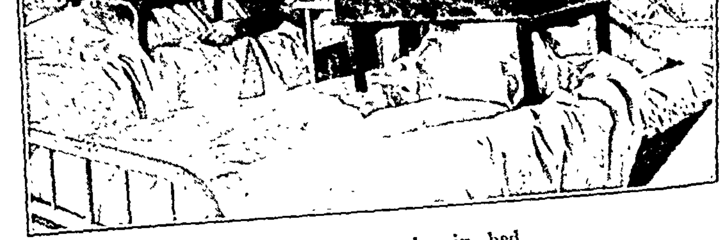

Fig. 3.—Telegraphy in bed.

climate, more or less uncontrollable insanitary environment of villages where they were billeted, or still worse conditions in the trenches or when advancing and living for days and weeks in a territory occupied by the armies of friend and foe for four years, the soil foul and infected; and finally they had to face a murderous, vicious foe who utilized every destructive element known to science and the devil to kill, wound or maim the opposing army.

But with all these embarrassments, difficulties and universal disability producing causes, the program of disease and injury prevention, and the medical and surgical management of our sick and injured soldiers was carried out by the Medical Department of the Army in a manner so successful that it justified the praise given by the chief commander of the American Expeditionary Forces and of the War Department.

In the making of our Army we selected the best of our young men from a physical point of view. Every man was immunized as a protection against smallpox, typhoid and paratyphoid fevers by standardized vaccines. Adequate clothing and blankets gave protection to the body. The American military shoe, the product of a research made by a regular Medical Corps officer, made him the best shod man of any army. Military drill and special training, discipline, life in the open, an abundant balanced ration and regular hours soon made an army of upstanding and physically fit men ready for any job. These new soldiers seemed to embody and demonstrate the spirit of patriotism of the nation. Physically and spiritually they had taken over new resistance to disease or injury. These same qualities made them bear disaster, when it fell, with courage and stoicism rarely seen in other men.

Overseas, special centers provided facilities for the correction of defects which were remediable by special training under qualified specialists and put the finishing touch on all. Prevention of combat injury was difficult at all stages of the war, owing to the nature of the weapons and destructive elements utilized by the enemy. Metal helmets and gas masks afforded some protection, but never wholly adequate.

During the last year of the war many lives were saved and in many cases permanent disability was obviated by the employment of efficient medical and surgical care. This modern military medicine and surgery was the outgrowth of the combined experience of the medical departments of the armies of the Allies and the United States, including cooperative research and clinical conferences.

FIRST AID

On the field the well trained medical personnel applied first aid and immobilized fractures with standardized splints carried to the field. This obviated further trauma of the tissues by the bone fragments during transportation to the rear. At evacuation hospitals within the combat zone and often subject to artillery fire, operations including the gravest major surgery were performed within a few hours after the injury was received. Unfortunately, in some battles a difficult terrain or in cases in which the battle was marked by fierce fighting and rapid advance, the evacuation of the injured was necessarily delayed. The soil of "no man's land" was always a source of danger of serious infection to the wounded. Nevertheless, the application of the new principles of prevention of additional trauma during evacuation from the field by proper fixation with splints, early and thorough cleansing of the wounds, by the removal of all foreign bodies and of devitalized tissues with open drainage obviated to a great extent gangrene and other serious types of infection, which were such a frequent cause of the loss of life and limb in the first years of the war. This explains the relatively small number of permanent disabilities through the loss of legs or arms of our disabled men. The successful application of lung surgery at evacuation hospitals and the life saving result is one of the remarkable events of the last year of the war.

The remarkable results of the treatment of the patients suffering from so-called "shell shock" is due to the application of the knowledge gained by military clinical experience. If this successful treatment had not been applied, thousands of soldiers would have been discharged suffering from types of mental and nervous disability. In the home environment and under the influence of the desire for a pension, many would become permanent invalids—an enormous loss to the industrial world and a continued financial burden to the government.

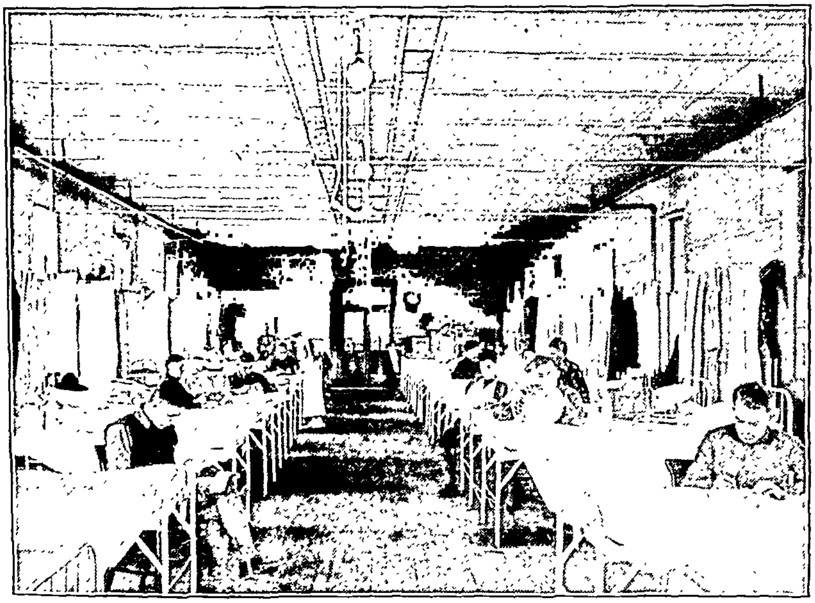
Fig. 7.—Curative work applied in the wards in the form of handcrafts.

STATISTICS AS TO DISEASE AND INJURY

In the discussion of the results of the application of measures of disease and injury prevention, I am permitted to quote available statistics. They are subject to correction after all data shall have been definitely verified. The deaths from typhoid and paratyphoid fevers in the domestic forces from Sept. 1, 1917, to March 28, 1919, were fifty. In the American Expeditionary Forces from Oct. 18, 1917, to March 28, 1919, there were 146, or a total in the U. S. Army of 196. This gives an annual death rate for typhoid and paratyphoid fevers of 0.06 per thousand. The efficient work of draft boards and of medical examining boards of training camps detected and rejected approximately 50,000 tuberculous men. Pulmonary tuberculosis developed in approximately 11,000 or possibly 12,000 soldiers, of whom 1,036 have died, giving an annual death rate in the whole army of 0.316 per thousand. The total deaths from other infectious diseases were: for meningitis, 2,055, giving a rate of 0.63 per thousand; measles, 119, or 0.036 per thousand; scarlet fever, 163, or 0.051 per thousand; dysentery, 41, or 0.001 per thousand; and empyema, 490, or 0.148 per thousand.

Fig. 9.—Curative work in shoeshop.

The pandemic of influenza complicated with a malignant type of pneumonia was the chief cause of death from disease in the Army at home and overseas. The medical profession, both civil and military, was unable successfully to institute measures of prevention or cure. The total number of deaths in the whole Army from Sept. 1, 1917, to March 28, 1919, was approximately 39,493, which gives an annual death rate of 11.997 per thousand. During the same period of time the total deaths from disease, including pneumonia, was 48,670, with a rate of 14.797 per thousand. The efficiency of the application of measures of disease prevention and of treatment is shown by the total deaths from disease alone, exclusive of pneumonia, which were approximately 9,177, giving an annual rate of 2.80 per thousand.

The efficiency of modern military surgery is evidenced by the official statement that 85.5 per cent. of combat injured soldiers of our Army returned to combat service, and 5 per cent. were made fit for special or limited military duty in the rear areas.

The remaining approximately 10 per cent. of the combat injured were so severely disabled that death occurred or the nature of the disability made them unfit for further military service. These included the blind, the deaf, patients with amputation of limbs, serious maxillofacial injury, serious peripheral nerve injury, empyema from trauma of lung or pleura, and other surgical conditions.

We may be justly proud of the accomplishments of the Medical Department of the United States Army in the world war. Serious mistakes occurred, due often to uncontrollable conditions and situations. The medical program of hospital construction, supplies, equipment, transportation and countless other needs had to be modified or to wait on other parts of the war program of the government. We know that many mistakes occurred, some serious ones, too, in regard to details, but the whole vast program of the government went through. The end sought was obtained much earlier and more satisfactorily than was anticipated. If the big governmental program had been carried through less expeditiously, perhaps fewer mistakes would have been made in all departments. But had we worked with less haste one wonders whether the Allied armies would now be astride the Rhine.

The policy of the Medical Department for the physical reconstruction of disabled soldiers and later extended to disabled sailors and marines, was formulated in August, 1917, applied in some of the general military hospitals early in 1918 and approved by the War Department July 29, 1918. Physical reconstruction was defined as continued management and treatment carried to the fullest degree of maximum physical and functional restoration, consistent with the nature of the disability, by the employment of all known measures of modern medical management, including physical therapy, manual and mental work and recreational play.

To carry out this policy a program was formulated to establish a department of education and a department of physiotherapy in each of the general military hospitals designated by the Surgeon-General to function in the physical reconstruction of disabled soldiers. A division of physical reconstruction in the Surgeon-General's Office was organized, with a director to be responsible for the administration of the work. Subsections on education and on physiotherapy, each with a director, were established in the division.

PERSONNEL OF EDUCATIONAL DEPARTMENT

To establish the educational department with efficient standards the Surgeon-General was fortunately able to secure the services of Dean James E. Russell of Teachers College, Columbia University, to serve as the administrative director. Dean Russell was unable to accept the place permanently, but volunteered to give his services in an advisory capacity for several days of each week in the organization of the educational department. This he did without compensation for the period of five months, when he was obliged to return to his duties at Columbia College. Dean C. D. Coffman of the University of Minnesota occupied a similar position in the office as a volunteer without compensation on the retirement of Dean Russell.

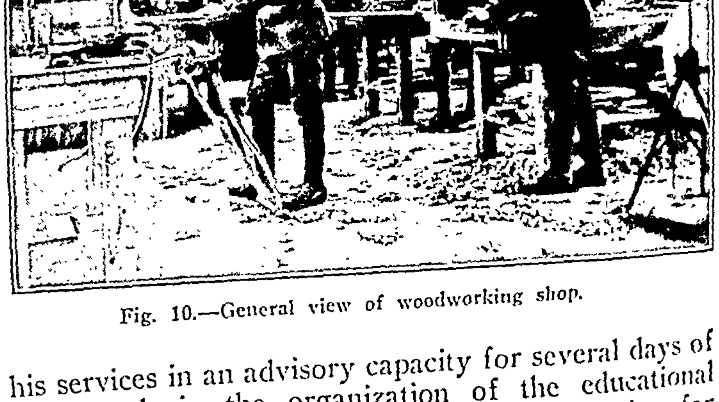

Fig. 10.—General view of woodworking shop.

Through the efficient service of these two patriotic men, aided by other qualified general and special educators, who came into service commissioned in the Sanitary Corps of the Medical Department, the Surgeon-General was enabled to establish educational departments and the needed personnel in each of the military hospitals where the work was required. Each hospital was supplied with a chief educational administrative officer, commissioned officers qualified as general and special educators and psychologists and noncommissioned and enlisted men able to serve as teachers and instructors of patients in the application of curative work in the program of physical reconstruction.

The director of physiotherapy in the office was able to secure a sufficient number of qualified medical officers to serve as directors of the work and a personnel of other commissioned officers, noncommissioned and enlisted men and trained qualified women aides in physiotherapy efficiently to apply physical treatment to disabled men.

Recreation in the form of exercise in gymnasiums and out of door games was secured through the American Red Cross cooperating with the Y. M. C. A., the Knights of Columbus, the Jewish Welfare Board and in the base hospitals and convalescent centers through the War Department Training Camp Activities.

WARD WORK

In the application of the curative workshop schedule, work in the wards for bed and chair patients was applied by women as reconstruction aides in occupational therapy. These women were qualified for the work by experience as teachers in high schools, colleges and universities in civil life and by special training in arts and crafts. Some of them had served in civil life as social welfare workers.

The ward work has proved of the greatest value in the cure of patients. Primarily, application of the work served as a diversion by arousing the interest of the patient and by distracting him from a contemplation of his disabled condition, whether due to sickness or to injury. At the beginning the schedule of ward work consisted of simple handcrafts in the form of knitting, beadwork, basketry, mat-weaving, block stamping, wood-carving and the like. As the work progressed, it was found that the interest of the patient was more readily aroused by work that was prevocational or even vocational in character, because it prepared him for the occupation that he would follow after discharge from the army or for further education and training by the Federal Board of Vocational Education. Consequently stenography, typewriting, mechanical drawing, winding electrical armatures, academic and commercial study and the more purposeful handcrafts were utilized.

As rapidly as possible buildings were altered or new ones constructed for workshops and schools, equipment installed, books were obtained through the American Library Association, and the convalescent patients were sent to the shops and schools for the application of the doses of work prescribed by the ward surgeons.

SHOP WORK

The schedule of work in the shops consists of motor mechanics, boot and shoe repairing, harness making, carpentry, electrical installation, printing, mechanical drafting and the like. In the gardens, landscaping and truck gardening are taught; on farms, ordinary farming, including stock breeding, dairying, poultry raising, hog raising and farm economics. Greenhouses are utilized at many centers to train men in horticulture and to grow vegetables. In the schools academic studies in common school branches including left hand writing are taught. Incidentally, aliens, and especially the illiterates, are educated and then naturalized as American citizens. Commercial courses are given in shorthand, typewriting, bookkeeping, banking, buying and selling, and many other branches.

SPEECH DEFECTS

At the U. S. General Hospital No. 11, Cape May, an efficient school for the disabled soldiers with deafness and defective speech successfully teaches lip reading and the correction of speech defect. The patients coincidently receive prevocational or vocational training.

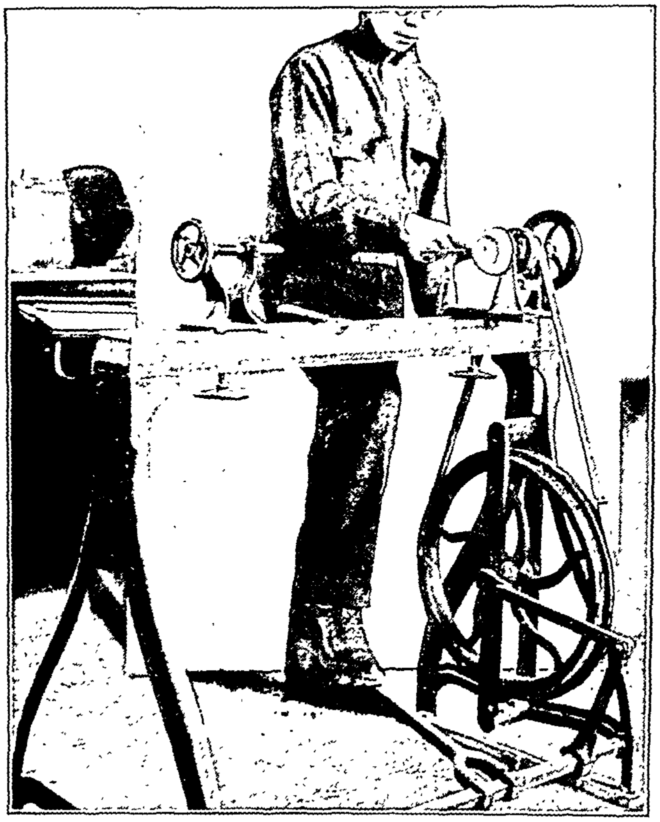

Fig. 11.—Curative work: Application of foot treadle to exercise disabled knee.

CARE OF THE BLIND

At the U. S. General Hospital No. 7, Roland Park, Baltimore, there has been established a school for the blind or nearly blind soldiers, sailors and marines. The blinded soldier is taught how to dress, feed himself and get about as an independent person, at the same time thorough instruction is given in Braille and coincident training in occupations suitable for the blind. In this connection, there are approximately one hundred totally blind, and approximately one hundred partially blind soldiers, sailors and marines.

THE TUBERCULOUS

The schedule of curative work applied to the disabled soldier suffering with pulmonary tuberculosis was modified to meet the varying clinical conditions under constant watchful medical supervision. Curative work for the tuberculous soldier has proved of the greatest value in the prevention of hospitalization and for the convalescent in the production of the final hardening process so valuable in the prevention of relapse, when the stage of inactivity of the disease has been secured.

SPECIAL CENTERS

A few of the general hospitals have been designated as special centers for the treatment of the nerve injuries, the maxillofacial mutilations, and of the amputation cases. At two or three centers, provisional artificial limbs and protheses are manufactured. There the men with amputations are fitted and trained in the use of the artificial appliances. In this connection it should be stated that the Bureau of War Risk Insurance is responsible for furnishing the discharged soldier with the needed permanent artificial limb.

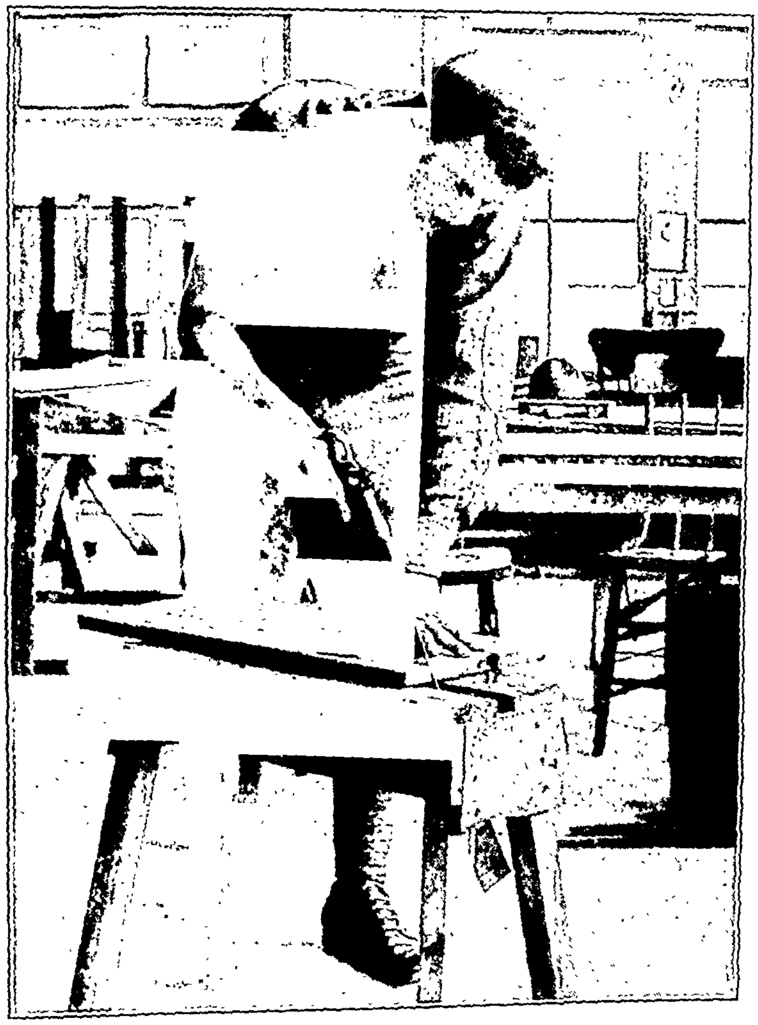

Fig. 12.—Curative work applied in the act of sawing, to improve the mobility of the elbow.

COOPERATION

In the application of curative work in the treatment of disabled soldiers it has been the endeavor to secure cooperation between the ward surgeons and the educational department. It has been recognized that the justification of the adoption of work as a therapeutic agent involves control by the surgeon and physician; that while the educational officer may evolve kinds of work, which to accomplish the end sought requires known muscular action, it is the surgeon or physician who must indicate the particular function to be restored and to prescribe the dose of work, the time it is to be given and the frequency of its repetition. The same cooperation is necessary between the clinical staff and the director and his personnel in the application of physiotherapy.

"CHEER UP" PROPAGANDA

For the information of the disabled soldiers circulars and bulletins have been published by the Medical Department of the Army outlining the program of physical reconstruction in the military hospitals. "Cheer up" propaganda has been placed in the hands of the patients and for their benefit, and, to educate the general public on the need of physical and functional rehabilitation, the Surgeon-General has published and distributed, with the cooperation of the American Red Cross, a magazine *Carry On*.

Cooperating with the Federal Board for Vocational Education, the Surgeon-General has compiled and published courses of study in pamphlet form, covering all phases of study and occupations as guides to teachers and patients, in the application of the curative workshop schedule in the wards, shops, schools, gardens and fields.

To the date of the signing of the armistice the educational activities applied in the treatment of the disabled soldier justified the vocational training of the convalescent soldier to fit him for further special military service. Until that date the general hospitals which functioned in the physical reconstruction of disabled men returned many men to general or special military service, and of these, the majority had been sent to the hospitals, with the belief they could not be made fit for further military duty. The application of curative work, physiotherapy, military drill, special training and play were the decisive factors in securing such complete physical and functional restoration that they were able to return to military duty.

THE RETURNED DISABLED SOLDIER

Following the signing of the armistice and the cessation of hostilities it was no longer necessary to keep the disabled man in overseas hospital until restored, because he would no longer be needed for the military service unless he had enlisted prior to April 6, 1917. Consequently, it became necessary to amplify the centers in this country for the physical reconstruction of the large number of disabled men from overseas who returned to America for treatment. To meet this need facilities were provided by the War Department at the request of the Medical Department, for physical reconstruction of disabled soldiers in departmental base hospitals and in base hospitals of the National Army cantonments. Additional general hospitals were also equipped for the work until a total of forty-nine hospitals were designated to function in the physical reconstruction of disabled men. In addition to the hospitals, nineteen convalescent centers were established in the training camps of the country to which convalescent detachments from overseas and convalescent patients from the hospitals of this country were distributed, each one sent to the center nearest his home, for a final process of hardening by the application of curative work both manual and mental, by general and special physical training through military drill and calisthenics, and by exercise at play in gymnasia and out of doors.

Since the armistice was signed the policy of the Medical Department of the Army is to discharge the disabled man as soon as he shall have reached the maximum physical and functional restoration, consistent with the nature of the disability. This leaves to the Federal Board for Vocational Education the responsibility for the occupational training and education which is the privilege of the compensable disabled soldier if he desire to take it. The application of physical reconstruction or a better term, physical and mental rehabilitation of disabled soldiers, has been justified by the result in the military hospitals of this country. With a small beginning it has grown within a year of practical application to a large establishment.

PERSONNEL

The personnel of educational officers with their subordinates, noncommissioned officers, enlisted men, as qualified administrators and instructors are as fine a body of men as one will find anywhere. They have given patriotic and efficient service to the country and have been and are recognized factors in the more complete physical and functional restoration of disabled men, who have thus been made fit to return to their old or a new occupation or have been physically and mentally prepared to take advantage of the opportunity for vocational training and education under the authority of the Federal Board.

Approximately eight hundred reconstruction aides in physiotherapy have given efficient service in the application of local baths, electrotherapy, massage and passive exercise to disabled men at home and overseas.

Approximately fourteen hundred reconstruction aides in occupational therapy have rendered service of the highest efficiency in the application of mental and manual work for the patients in wards in overseas and in domestic hospitals. These women who have served the government as reconstruction aides in physiotherapy and in occupational therapy are deserving of the highest praise for the work they have done for the disabled men.

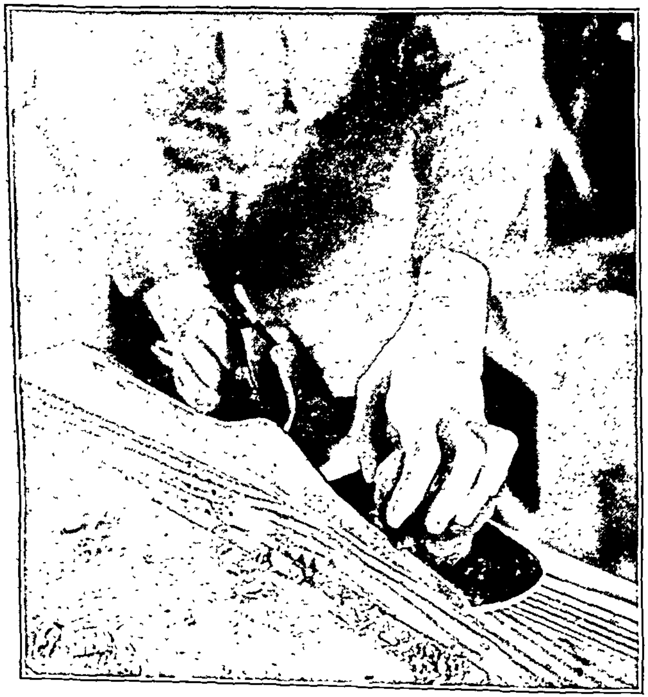

Fig. 13.—Curative work; using carpenter's plane with molded hand grip to exercise disabled hand.

It is common expression of all officers who have come in contact with the disabled sick and wounded soldiers that the application of curative work and physiotherapy has done much to improve the morale, maintain discipline, prevent hospitalization and to hasten and make more certain the cure of the patients.

PERMANENT POLICY

It is believed that the experience and application of curative work and standardized physiotherapy in the military hospitals during the emergency created by the war, will become a permanent policy of the military establishment of the United States. This policy will necessitate the designation of certain general and military post hospitals to function in the physical reconstruction of the sick, injured and disabled men. Facilities for this work in military hospitals will include the application of curative work that is vocational in character. Vocational training in the military hospital is justified by law and by the fact that the disabled soldier may continue in military service provided the nature of the disability permits restoration consistent with further service. The vocational training and education received while a patient will make him of greater value as a soldier and at the expiration of his term of enlistment, should he decide to return to civil life, he will serve with greater efficiency in the industrial army.

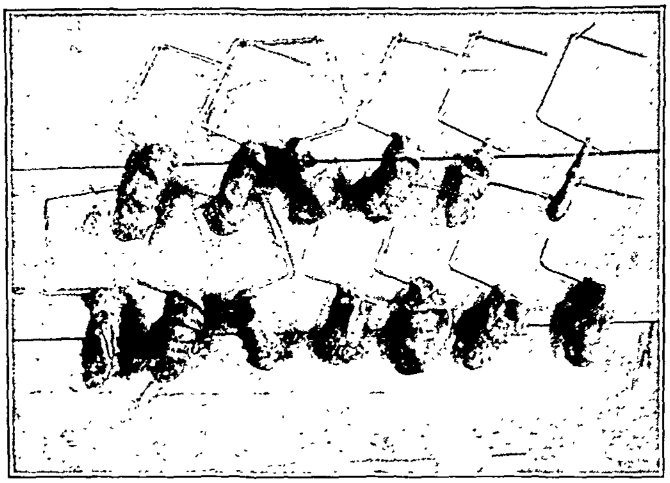

Fig. 14.—Examples of plastic wax handles for jig saws molded to fit individual disabled hands.

II. REHABILITATION OF THE DISABLED OF THE INDUSTRIAL ARMY

It has been stated that 750,000 people of eighteen of the United States of America are injured annually in the industrial occupations. Of these, 35,000 are permanently disabled. It has also been stated that 80,000 people are permanently disabled annually in the whole United States through accident received in industrial occupations. Of these it is stated that 2,000 are totally disabled.

This enormous crippling or entire loss annually of the industrial workers has not received the consideration due these unfortunates by federal, state or local governments, or by corporations engaged in industrial work.

Sporadic attempts have been made by local communities or by corporations to overcome the handicap due to the disability by the application of measures of physical and mental rehabilitation. But, as stated, the attempts have been purely local, small in character as compared with the enormous problem and have been characterized by partial success only because of the

SOME OBSERVATIONS ON THE SURGICAL TREATMENT OF GONORRHEAL EPIDIDYMITIS

WITH TECHNIC OF OPERATION

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Owing to the war, with the visible increase of gonorrhea, and to the many opportunities for observing and recording cases in army practice, it has been possible to collect a large number of case records of the various types with their complications. The purpose of this paper is to draw some conclusions from the results obtained by the surgical treatment of gonorrheal epididymitis.

Various writers have placed the incidence of gonorrheal epididymitis at from 10 to 25 per cent. It has been 15 per cent. during the past year at the Canadian Special Military Hospital, Etchinghill.

Cases of epididymitis show a distinctly longer stay in hospital than many other complicated types of gonorrhea. In addition they are a frequent source of relapse of the urethritis, the cause of sterility on the side affected in a very high percentage of cases, and the reason for a great deal of acute pain and discomfort to the patient. The operation of epididymotomy was commenced as a routine measure with a view of shortening the duration of treatment in hospital, of reducing the liability to sterility and of relieving symptoms.

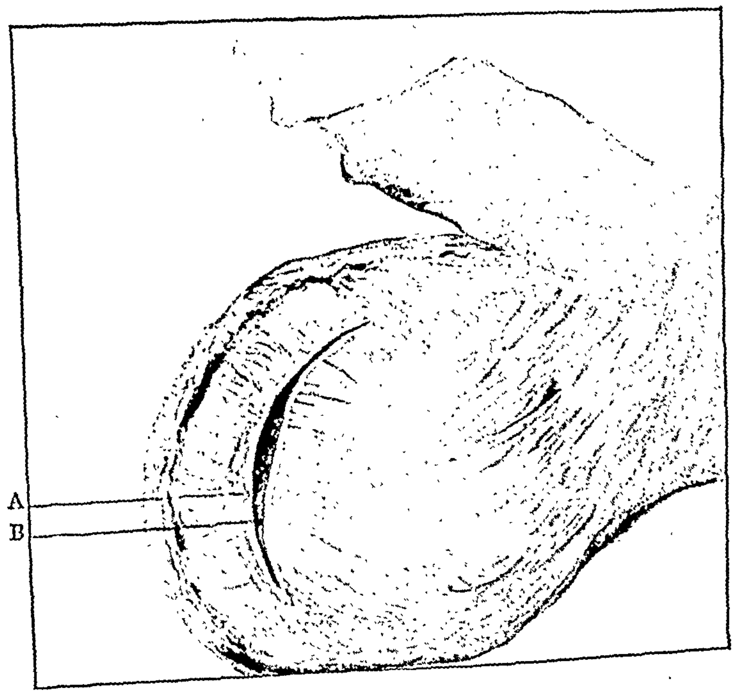

Fig. 1.—Initial incision: *A*, dartos; *B*, cremaster.

I have observed two distinct types of gonorrheal epididymitis; first, the subacute type, coming on slowly, in which the epididymis never becomes much larger than a man's thumb, with only a slight hydrocele and very little edema or redness of the scrotum. In these cases the pain is not acute, and constitutional symptoms are not marked. It is seldom that these cases develop into the second or acute type, in which the onset may be, (*a*) slow, resembling the beginning of the subacute type, but gradually progressing in a few days, with intense pain, marked redness and edema of the scrotum, pain in the cord, radiating into the iliac fossa, accompanied by hydrocele, fever and high leukocyte count; (*b*) rapid, commencing with pain, swelling, edema, fever and hydrocele, progressing to an acute stage within from twenty-four to forty-eight hours. These types are due undoubtedly to the degree of virulence and to the strain of the infecting gonococcus.

There may be three channels of infection: (1) direct extension through the urethra, ejaculatory ducts, vesicles and vas; most observers incline to believe in this method of infection; (2) the lymphatics, which to my mind constitute a more common channel of infection than is generally supposed; (3) the blood stream, which is least likely.

If we consider the pathology of an acute epididymitis, we find that the epididymis becomes enlarged, tense and painful, and on section it is found congested, showing tubules distended with some fluid exudate. Frequently this passes on to actual abscess formation. The exudation which causes most of the enlargement is due to the inflammatory process around and between the convolutions of the tubules and duct of the epididymis. If this process goes on to pus formation, small cavities fill with pus and form small localized intertubular abscesses. The cells of the ducts are infiltrated, a certain amount of epithelium is shed, and the lumen contains a mixture of pus, epithelium and spermatozoa. The inflamed surface of the tunica vaginalis gives off an exudate which is at first clear, and later may contain pus and fibrin, or even go on to definite pus formation. It is claimed that a great deal of the pain present is due to the tension caused by the hydrocele. My personal experience has been that this is not the case, but that the tension occurring within the fibrous tunica covering the epididymis, caused by the inflammation and edema of the body, and which sometimes extend up into the cord, is primarily responsible fo the pain. Hagner[1] in his original article quotes Monod and Terillon, who have shown that the enlargement of the epididymis is due to the edema or inflammatory exudate occurring in the cellular tissue surrounding the tubules rather than to any changes in the tubules themselves. After having dissected off the fibrous tunica from the cord and having made an opening in its upper and anterior border, they were able to fix a cannula into the cellular tissue and to inject through the cannula a weak solution of gentian violet. When the fibrous tunica had been sufficiently filled they saw that the infiltration characteristic of this special form was reproduced and resembled an increase in size of the epididymis. Hagner himself has duplicated the above experiment.

I have found the globus minor to be the part of the epididymis most frequently involved, the body more rarely, and the globus major least frequently. In one of my cases I found the entire body of the epididymis destroyed; a large abscess communicated directly into the testicle, of which a mere shell remained, owing to the great destruction of tissue. It was deemed advisable to remove the testicle.

When resolution commences the hydrocele is gradually absorbed, the tunica vaginalis is in many cases bound down by dense adhesions, either to the tunica albuginea or to the cremasteric fascia, or to both. Often absorption does not take place and a chronic hydrocele results. Within the epididymis itself the pus may be absorbed and the resulting pocket filled with fibrous tissue. Even the cells of the tube itself may become fibrosed, and from the resulting contraction the lumen may be occluded. It frequently happens that this process takes place en masse, and we have a resultant hard fibrous nodule which is usually felt, even for years afterward, in the globus minor. In some cases the gonococcus is harbored in the center of these nodules and may be the cause of a subsequent reinfection or recurrence of the urethritis. Baerman[2] has found gonococci in foci in the epididymis years after the infection occurred. It is undoubtedly true that a great proportion of these patients showing nodules are sterile on the side involved.

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[1] Hagner, F. R.: Ann. Surg., 1908.

The advantages of operative interference in cases of gonorrheal epididymitis of all types are numerous. It is considered good surgery to evacuate pus in any locality. In my experience, if done for the relief of pain alone, the operation of epididymotomy is justifiable. Following Hagner, several observers have recorded their findings and results in a very convincing manner, and yet today this operation has not been generally adopted in the treatment of epididymitis.

The chief objections to operation appear to be:

(1) There is danger of injuring the tubule of the epididymis. There is very little danger of severing a tubule if care is taken and the proper technic is employed. Even though a tubule is severed, in my opinion, it soon unites or anastomoses. When we consider the remarkable reparative property of the vas, as illustrated in cases in which it has been severed with a view to causing sterility in certain mental subjects and in habitual criminals and has later reunited and functionated, it seems that the same may be probable in the epididymis.

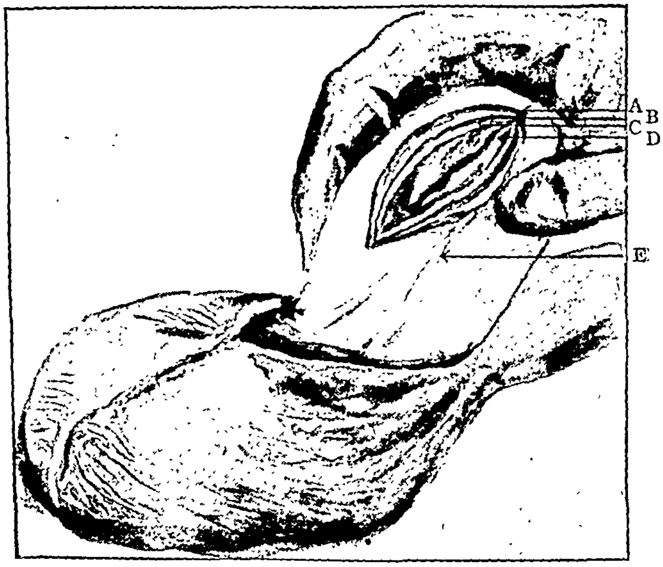

Fig. 2.—Incision exposing the epididymis: *A*, parietal lamina of tunica vaginalis; *B*, visceral lamina of tunica vaginalis; *C*, tunica albuginea; *D*, epididymis; *E*, veins.

(2) Puncture of the epididymis is an efficacious form of treatment. Many urologists adopt this procedure and report good results. My experience has been that puncture only temporarily relieves tension and pain, and usually does not favor early resolution, nor does it prevent fibrous tissue formation. It seems clear that though fluid may be aspirated by a small puncture made with a needle, there can be no drainage, and while the process is acute the edema or exudation soon causes again tension in the fibrous capsule.

(3) Epididymotomy is too radical a procedure to become popular. The operation is simple, however, and should take only a few moments to perform. If we can prevent or lessen the liability to sterility by its use it is clearly indicated.

Hagner[1] states that in every case in which he has operated fluid was present. He notes a marked falling off in the leukocyte count after operation. Reporting on nineteen of his own and two other cases, pus was present in seventeen of the twenty-one cases; in the globus minor in twelve cases, in the globus major and minor in three cases, in the globus major in one, and in the tunica vaginalis in one, the latter having no abscess involvement of the epididymis. In these twenty-one cases the gonococcus was demonstrated five times in the pus from the epididymis, and once in pus from the tunica vaginalis, when none could be found in the epididymis. He lays stress on the rapid disappearance of induration in both the cord and epididymis after operation, and states that nine patients have had a hard nodule of the globus minor, lasting for a long time, such as persist so frequently in those treated without operation. The average time before his patients were up was five days. He also observes that the discharge in patients treated medically increases after the swelling goes down, but decreases in patients after operation.

Baerman[2] states that in a considerable proportion of cases of epididymitis abscesses are formed, and that suppuration is regularly followed by the appearance of the hydrocele. He advises early interference to save the canal from occlusion.

Eckels[3] observes that the usual symptoms—pain, swelling, dragging, etc.—are proportionate to the amount of fluid secreted. Consequently, the liberation from its sac of this fluid immediately relieves all symptoms. He states that if the disease can be arrested in its first stage by the method under consideration, pus and abscess formation can usually be avoided. Thus he argues that in an attack mild in character and seemingly amenable to medicinal treatment the operative plan is the more expedient. In my experience I have found this to be true. It is certain that in no case in which I have operated has there been any tendency for the process to increase after operation.

Eckels' conclusions are:

> The relief of pain is instantaneous; internal administration of sedatives, opiates or loathsome external applications are unnecessary. The abatement of fever takes place in from twenty-four to forty-eight hours. Swelling, tenderness and other symptoms rapidly disappear. There is no tendency to recurrence. There is insured a minimum of time lost from usual activities, and there is probably a smaller percentage of sterility following the disease.

Knight[4] agrees with Eckels in all of his statements, and reports five cases in which he used local anesthesia.

Crosbie and Riley[5] report twenty-eight cases, two of which were bilateral. They first used general, but now use local, anesthesia. Their method of inducing local some due to fibrous induration caused by the inflammatory process. The operative advantages as to the end-result following resolution can be aptly demonstrated in several cases in which there has been a bilateral infection, one side of which has been operated on and the other treated otherwise. Without exception these cases show less thickening on the side where surgical interference has been employed. Several of these patients had been treated expectantly on one side before I had commenced epididymotomy as a routine measure. This observation throws some light on the point of resolution in favor of surgical interference.

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[2] Baerman: Deutsch. med. Wchnschr., 1903, No. 40.

[3] Eckels, L. S.: J. A. M. A. 61: 470 (Aug. 16) 1913.

[4] Knight, C. P.: Epididymotomy, J. A. M. A. 62: 351 (June 31) 1914. Culler, R. M.: Epididymotomy, J. A. M. A. 60: 415 (Feb. 8) 1913.

[5] Crosbie and Riley: Boston M. & S. J., May 6, 1913.

I have yet to encounter a case in which the operation has not almost immediately relieved the pain. There have been a few patients who complained of tenderness a day or so later.

In a comparative study of fifty patients treated by the operative method and fifty treated otherwise the following points are brought out: Of the fifty operative cases, pus was found in 80 per cent., either macroscopically or microscopically, and in those in which pus was found the gonococcus was present in 32 per cent.

Bazet[8] found gonococci in 33 per cent. of his cases. The wound, including the sinus, healed in an average period of fourteen days. Pain was present in varying degrees in all cases, and was relieved in from two to forty-eight hours.

There was a hydrocele present in 90 per cent. of cases, and in the 10 per cent. not having hydrocele the pain was relieved immediately following operation. In the fifty nonoperative cases pain was present in varying degrees in 98 per cent. The accompanying table shows the comparative length of time in which pain was relieved; also the comparative end-results when resolution was considered complete.

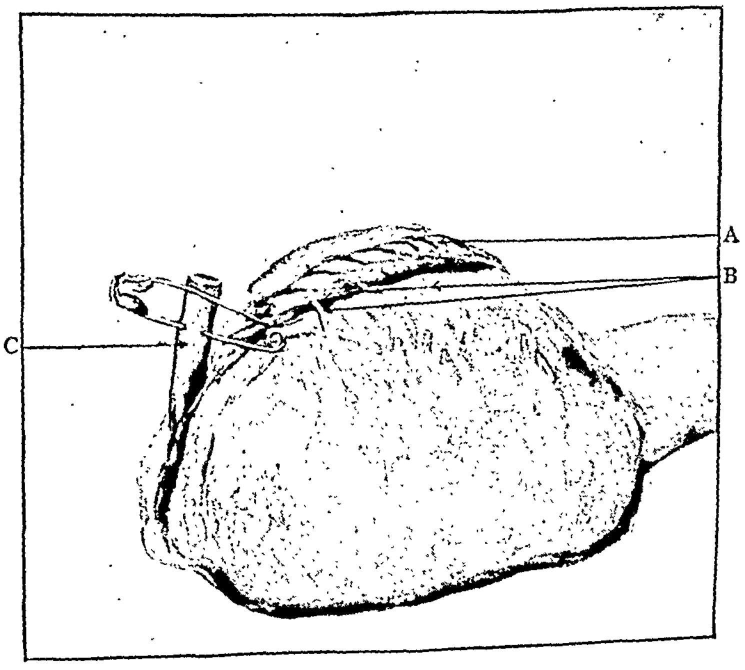

Fig. 5.—Final sutures: *A*, silk skin suture; *B*, silkworm-gut mattress retention sutures; *C*, drainage tube.

In the nonoperative series it is interesting to note that three cases have relapsed, or reinfection of the original process has taken place, at some period following primary resolution. In one case in the series there were three such relapses. In one case there was a nodule as large as a walnut, which was still quite tender, although the original infection had occurred in the year 1912.

TIME REQUIRED FOR RELIEF OF PAIN AND FOR COMPLETE RESOLUTION, WITH END RESULTS

	Pain Relieved Within	Average Days Resolving	Complete Resolution Per Cent.	Very Slight Thickening, Per Cent.	Moderate Thickening, Per Cent.	Marked Thickening, Per Cent.
50 operative cases	24 hours	30	40	58	2	0
50 nonoperative cases	3-6 days	40	8	60	30	2

This is in marked contrast to the results obtained by the operative method. There were no relapses in the series, and in only one case was there a suspicion of reinfection. In this case the drain was removed within twenty-four hours and for two or three days there were some tenderness and pain, but no increase in size. The process subsequently went on to rapid resolution.

It was also noted that the shorter the duration of the epididymitis prior to operation, the shorter the period of resolution. This seems to prove that early interference, that is, before the tunica vaginalis becomes thickened, fibrin deposits are formed, and chronic infiltration takes place, or before pus foci are formed, is the proper procedure in cases of acute epididymitis.

The observations as to the improvement of the urethritis are markedly in favor of the operative series. In over 50 per cent. of the nonoperative cases a relapse of the urethritis occurred, while of the operative cases only 4 per cent. relapsed.

It has not been possible, in the cases selected for comparison, to note the findings in the vesicles, but it would be interesting to follow up these cases from the standpoint of vesicular infection or reinfection following the epididymitis.

CONCLUSIONS

1. Early operation is advised to prevent destruction or occlusion of the tubules.
2. The pain is relieved almost immediately by surgical interference.
3. The process is considerably shortened.
4. No accurate conclusions as to sterility may be made except in bilateral cases, but present evidence favors epididymotomy as a means of preventing sterility.
5. There is less liability of a recurrence of the urethritis.
6. The operation should be more generally employed.

Canadian Hospital, Etchinghill, Kent, England.

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[8] Bazet: J. d'urol. méd. et chir., Jan. 24, 1915.

Tuberculosis Among Industrial Workers a Home Problem.—A special report of the Medical Research Committee of Great Britain deals with the prevalence and etiology of tuberculosis among industrial workers. The city of Birmingham was selected for a special inquiry and the nonferrous metal trade was chosen. Forty works were visited and inspected thoroughly and as many of the notified persons as could be identified were questioned about themselves. A dangerous proximity was observed in certain departments, the girls working very close together. The objectionable habit of spitting into the receptacles which hold the lubricating mixture, found in all shops where "wet" metal work is carried on, is condemned as being a disgusting and possibly a dangerous practice. No evidence of any other dangerous trade habit was found. The home housing conditions were found very unsatisfactory in many parts of the central or crowded area, and the evidence goes to show that the home is really the principal place of infection either through contacts or imminent in the house itself.—*Med. Officer* **21:** 121, 1919.

DISSEMINATED NECROSIS OF THE PULMONARY CAPILLARIES IN INFLUENZAL PNEUMONIA *

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One of the difficulties in attempting to find an explanation of either the hemorrhage or the huge edema[1] of the lungs in influenzal pneumonia is that many different stages are encountered, most of them well along or late in the disease.

Very early in this attempt, attention was directed to the presence of a layer of fibrin close to the lining of the alveoli and ducti alveolares, often a very thin layer and in some instances the only fibrin present. With lobar pneumonia (by this term I mean a disease which is lobar pneumonia not only anatomically but also clinically), such a limitation of the fibrin deposit to the alveolar lining is not common.

Another outstanding condition is the necrosis of the alveolar lining epithelium, which appears early as a hyaline layer in which the outline of the separate cells is entirely lost, thus becoming a layer of necrotic cells sometimes with fibrin on its inner surface or in it and in some instances with very little fibrin anywhere else in the alveoli. Later in the disease these cells are reproduced and the large new cells may be found with mitotic nuclei in them.

DISSEMINATED CAPILLARY NECROSIS

While studying these as well as other conditions, I encountered a feature of the changes in influenzal pneumonia which may throw some light not only on the hemorrhages but also on the edema. This feature, a disseminated necrosis of the interalveolar capillaries, is readily found in places markedly changed, where the alveoli are already filled with blood or plasma, with the addition at times of the comparatively slight leukocytic exudate so characteristic of influenzal pneumonia. But with such changes it may well be inferred that necrosis of the interalveolar walls and of the capillary meshwork they contain is altogether secondary to alterations within the air sacs. But examination of many sections from many postmortem examinations has revealed some conditions in which such an inference of necrosis secondary to the pneumonia may well be doubted, and the accompanying photomicrographs are an attempt to set these lesions clearly forth with the hope that others, too, will search for them.

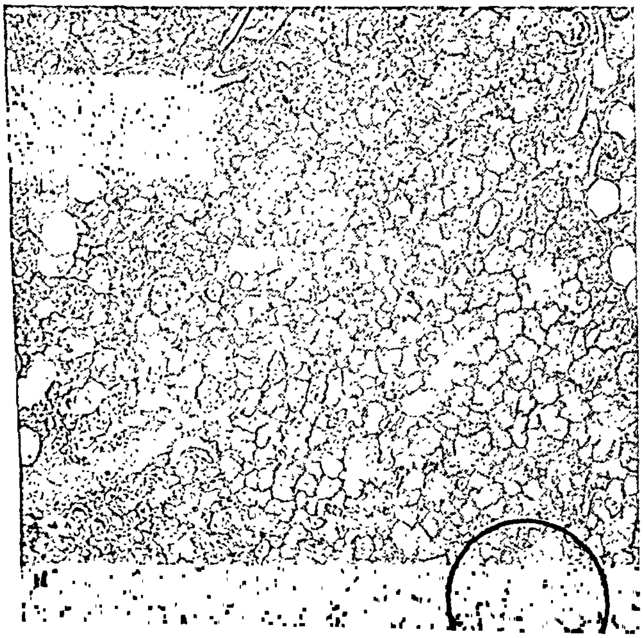

Fig. 1.—Most acini in this section of about 7 sq. mm. of lung tissue from a patient who died from influenzal pneumonia contain some red blood corpuscles, some none; all contain some leukocytic exudate. Edema is more widespread than either of these alterations. The necroses indicated by Fig. 2 are everywhere as abundant as in the small part of the section selected for Fig. 2; × about 14.

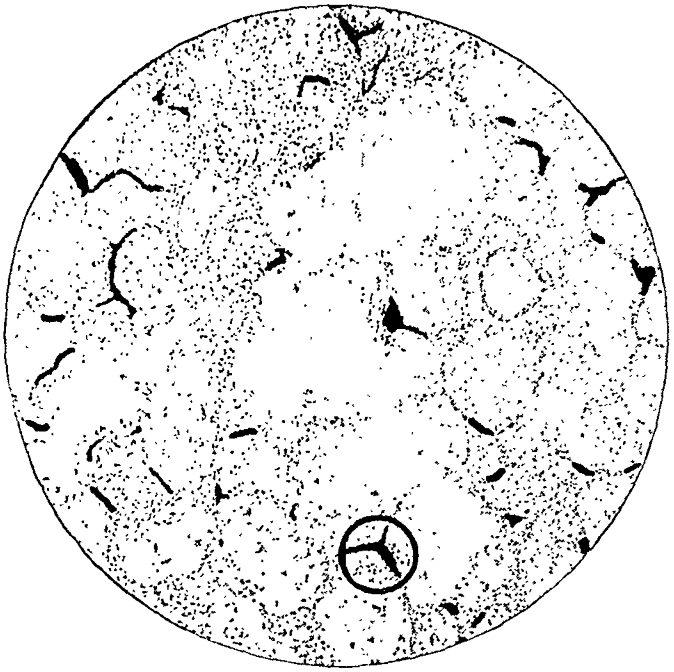

Fig. 2.—The necrotic regions are made black with india ink to show their number and the amount of the interalveolar capillary meshwork and alveolar wall involved; × about 60.

Although present in a few lungs seen in other postmortem examinations, the best examples of this disseminated necrosis were found in some of the small regions of pneumonia in the lower lobe of the right lung (weight 1,350 gm.) of a soldier, aged 23, who became acutely ill after having had a slight cold for six days and who died four days later.

Figure 1 represents about 7 sq. mm. (magnification 14 diamaters) of a section in which the pathologic condition is chiefly edema. Scarcely any alveoli are jammed full of red blood cells. A little fibrin is peripherally disposed in the air sacs, and a little exudate of leukocytes is present in most of them, but at no place is there any highly cellular consolidation. The pale oblong space jutting in from the lower half of the left edge is a hugely dilated perivascular lymph channel. Part of the circle in the lower right-hand corner represents the region shown in Figure 2 (magnification 60 diameters); in this the portions of the interalveolar meshwork of capillaries which are necrotic have been made black with india ink, as accurately as possible. The region included in the circle near the lower margin is shown in Figure 3 (magnification 470 diameters).

The changes that are illustrated by these figures, such as fragmentation of nuclei and "nuclear dust" in tissue taken a few hours after death, and, moreover, in which there is no suggestion of postmortem change; a

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* From the Pathological Laboratory, Rush Medical College.

[1] LeCount, E. R.: The Pathologic Anatomy of Influenzal Bronchopneumonia, J. A. M. A. 72:650 (March 1) 1919.

widely disseminated, sharply outlined focal necrosis of the minute blood vessels and with so little of alteration except edema in the lung tissue, goes a long way toward at least suggesting an explanation for a number of things, such as the early hemorrhages in the lung, the escape of such large amounts of fluid from the blood into the lungs and from them into the pleural cavities, also the "button-like" firm peripherally located regions of consolidation compared by many observers to hemorrhagic infarcts.

They also suggest that the disease if not very early a systemic infection may become so later, because the nature of these lesions is best explained by embolism. In such sections as these no organisms other than those commonly present have been found.

CONCLUSION

In conclusion it may be well to emphasize that the 7 sq. mm. of Figure 1 is but part of a section, and that the necrotic regions represented by india ink in Figure 2 may be found not only in all parts of the 7 sq. mm. of Figure 1, but also in all parts of the section containing the 7 sq. mm., and in other sections as well; also, as stated, in sections of some of the other lungs examined. It may well be that such discrete necroses as these, with so little of other change except edema, represent a phase of the disease which is of short duration.

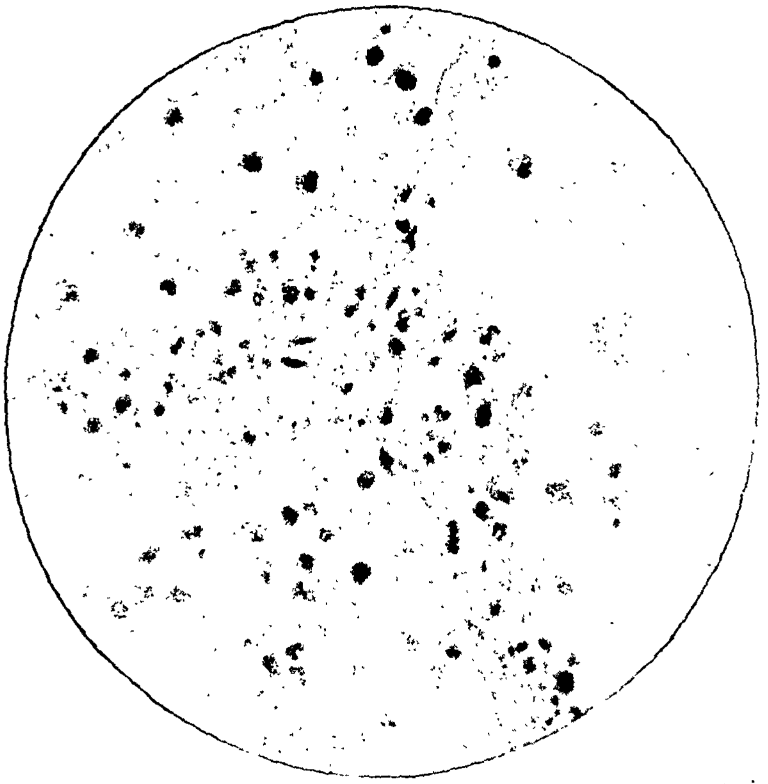

Fig. 3.—No red blood corpuscles or very few are present in the necrotic places, more commonly at junctions of adjacent alveoli, and their walls are replaced by leukocytes, fragmented nuclei and fibrin. The capillary meshwork is continued at the ends of these necroic regions and the blood for the channels and circulation are interrupted. circulates in them as usual; × about 470.

Influenza has been compared with the exanthematic fevers such as measles. Prodromal engorgement of the conjunctival blood vessels is referred to by many observers,[2] also the early appearance of lividity of the pharynx, described as a red fringe or crescent bordering the hard palate, with minute hemorrhages and a papulovesicular rash in the livid mucosa (Alexander). Moreover, Oberndörfer[3] has defined the disease as a bacteriemia with localization of the virus in the pulmonary blood vessels and secondary infection of the lung tissue so involved. For the foregoing reasons it has seemed best to attempt some description of these necroses at this time.

STUDIES IN STREPTOCOCCIC INFECTIONS AT CAMP CUSTER, MICHIGAN

WITH SPECIAL REFERENCE TO INFLUENZA AND OTHER ANTECEDENT INFECTIONS

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Sixty-five per cent. of the deaths from acute infections occurring in this camp since its establishment and coming to necropsy have been due to the streptococcus. If the month of October, 1918, is excluded, when influenza was epidemic here, the streptococcus has been responsible for 75 per cent. of the fatal acute infections. For more than a year the attention of this hospital has been focused on the diseases caused by this extremely prevalent and virulent organism, and the facts which this experience has brought to light are here assembled.

TABLE 1.—BACTERIOLOGIC FINDINGS IN ACUTE INFECTIONS AT NECROPSY

	Deaths from Streptococci		No. Deaths from	
	Number	Per Cent.	Pneumococci	Other Acute Infections
Prior to the influenza epidemic..	37	70	10	6
During the influenza epidemic....	142	62	78	8
Since the influenza epidemic.....	26	86	1	3
Total	205	65	89	17

Reference to the accompanying chart will show the total incidence of streptococcus, compared to its closest competitor, the pneumococcus. The incidence of measles has also been charted. It will be seen that streptococci, except for a period in the spring and summer of 1918, have always outnumbered pneumococci. During the summer months, living conditions peculiar to military establishments are less productive of carriers, and cross infections by such organisms as hemolytic streptococci appear to be less frequent. Certainly during the summer months the relative incidence of these two infections more nearly approached what is commonly observed in civil life.

This camp was several months old before streptococcic infections began to appear. It was in January, 1918, that acutely fulminating pleurisies appeared associated with bronchopneumonia, terminating fatally in a high percentage of cases. Irons and Marine[1] were among the first to recognize the relation of these fatal infections to such antecedent factors as exposure and fatigue, or to other diseases, such as measles. Throughout the winter, streptococcic invasions continued to occur with such frequency and astonishing virulence as to awaken the greatest concern. However, with the advent of spring they gradually lessened, and virtually disappeared during the summer. Coincident with the appearance of influenza in October, 1918, the streptococcus again came forward as the cardinal cause of death, regularly manifesting itself in a bronchopneumonia. During the epidemic, 674 deaths occurred, about two thirds of which were due to the streptococcus. During the four months since the epidemic, streptococci have occurred with even greater relative frequency, twenty-six out of the last thirty cases of acute infections coming to necropsy having had a fatal issue owing to the presence of this organism. During February, 1919, eighty-four infected wounds have shown hemolytic streptococci. Many cases of otitis media and numerous very severe mastoid infections have also appeared. Indeed, the greatest variety of localization has been encountered. This has been noted following the crest of each new wave of acute infections.

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[2] Alexander: Berl. klin. Wchnschr., 1918, No. 38, abstr., Deutsch. med. Wchnschr., **44**: 1171, 1918. Bloomfield and Harrop: Bull. Johns Hopkins Hosp. **30**: 1, 1919.

[3] Oberndörfer: München. med. Wchnschr. **65**: 810, 1918.

[1] Irons, E. E., and Marine, David: *Streptococcal Infections Following Measles and Other Diseases*, J. A. M. A. **70**: 687 (March 9) 1918.

OCCURRENCE OF STREPTOCOCCI AS SECONDARY INFECTIONS

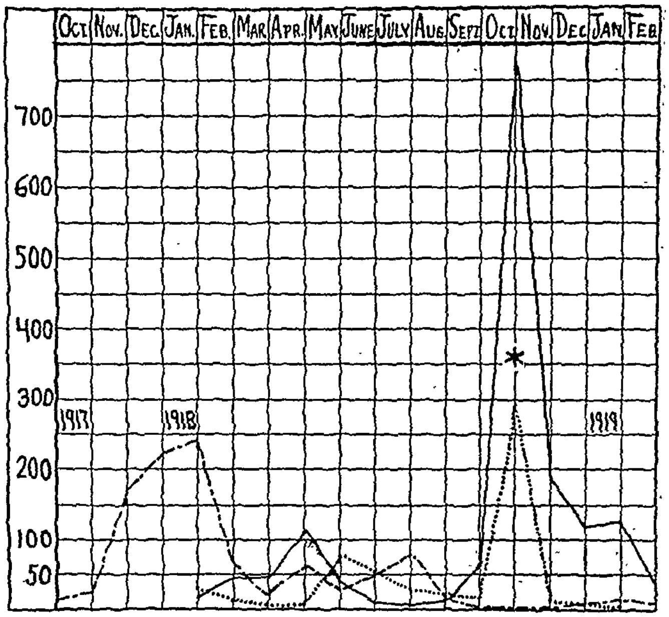
Streptococci have occurred at Camp Custer chiefly as secondary infections. Two methods of invasion have to be considered:

1. A very sudden and severe antecedent infection may so lower resistance that the ordinary mouth organisms gain admittance to the body with ease and in great numbers. An extensive example of this mode of secondary invasion was seen in the influenza epidemic. In this epidemic, death was invariably the result of a bronchopneumonia. These bronchopneumonias were not produced by a single organism, as would have been the case had a highly virulent and contagious organism been abroad at the time. On the contrary, they appeared to be caused in each case by the organism which the individual happened to have predominating in his mouth at the time, no matter whether that was streptococcus, pneumococcus, staphylococcus or Pfeiffer's bacillus. The very suddenness with which the epidemic came, attended immediately by secondary pneumonias, enforces the same idea. During this epidemic, *Streptococcus hemolyticus* caused only a few more deaths than the nonhemolytic strains. Pneumococci were recovered in about half as many cases as streptococci, and only a few staphylococci and Pfeiffer's bacilli were found. However, with the advance of the epidemic, *Streptococcus hemolyticus* became more and more prominent, while other causative organisms were encountered less frequently. *Streptococcus hemolyticus* appeared to gather virulence and prevalence more rapidly than the other organisms encountered earlier.

2. In other cases the virulence of the streptococcus appears to be the principal determining factor. Such cases were encountered in the early months of 1918, to which we have already referred. At that time masks were not generally used throughout the hospital, and the cubicle system was not in vogue in all wards. Superinfection was therefore much more of a possibility than at the later period, such as during the influenza epidemic. The fact that for several months antedating the appearance of these acute streptococcus infections many cases of measles and quite a number of so-called "colds" had been admitted to the base hospital with almost negligible complications speaks for a more important factor than the antecedent infection. This was evidently furnished in the virulent strains of streptococci brought into this camp by new troops arriving in January, 1918. The fact that many of these new arrivals were ill on reaching camp was brought out in the empyema report[2] of this camp covering that period.

FACTORS IN THE INCIDENCE OF STREPTOCOCCIC INFECTIONS

There are undoubtedly many contributory factors making for streptococcic invasions. An analysis of the records of 2,149 cases of pneumonia following influenza was undertaken in an effort to bring to light some of these factors. The majority of these pneumonias were, as we have said, streptococcic in origin.



Total incidence of streptococcus and pneumococcus infections charted by months, Camp Custer, Mich., September, 1917, to March, 1919: continuous line, streptococcus; broken line, pneumococcus; dotted line, measles; star, influenza epidemic.

It was not possible to determine what proportion of troops in this camp came from large cities, small towns, and rural districts, respectively. But it was possible to learn the relative incidence of influenza in troops falling into these three classes. From these figures the proportion of influenza that was complicated by pneumonia and terminated fatally was obtainable. The results of this analysis are set forth in Table 2. The percentage of pneumonia following influenza was more than twice as high in troops from rural districts as in troops from small towns or cities. *This difference did not* seem to exist as far as influenza alone was concerned. In other words, the existence of a previously established immunity was *not evident in the case of influenza*, but was evident in respect to secondary infections such as pneumonia. Troops from rural districts were probably no more susceptible to influenza than any other troops, but twice as high a percentage from rural districts died because they were twice as susceptible to secondary invaders, particularly to the streptococcus. After pneumonia developed, the death rate was approximately the same.

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[2] Review of War Surgery and Medicine, 1, No. 9, 1918.

Out of 39,675 troops stationed at this camp at the time of the influenza epidemic, approximately 23,000 had seen less than two months' service, or about 60 per cent. of the command was composed of new troops. Table 3 illustrates the greater susceptibility of new troops to both the initial and the secondary infections, and the attendant high mortality in such troops. The physical strain incident to change from civilian to army life which new troops have to undergo before they become acclimated probably accounts in part for the increased susceptibility to infections. As Irons and Marine pointed out, the same factors were probably operative during the winter months of 1918. Unaccustomed to long hikes, exposure and the undoubted physiologic shock of vaccination, new troops show less resistance to all acute infections. Opie and his collaborators found the same thing to be true at Camp Pike.[3] Wallis collected even more striking figures at Camp Lee.[4] But in addition to all these possible factors, there seems to be still some intangible but evident difference between new and old troops, on account of which the latter become less susceptible to disease when both classes are under the same conditions.

That organisms gain admission to the body of the host owing to disturbances in the normal balance of resistance and virulence is well known. This method of invasion has already been referred to in discussing postinfluenzal pneumonia, and needs no further amplification. But the question of contact infection remains to be considered. Table 4 serves to illustrate the effect of contact on the incidence of secondary pneumonia. This point is forcibly impressed after comparing the figures for medical officers and nurses with those for line officers. The high incidence of infection among those in the hospital in contact with the disease during the influenza epidemic has another explanation in the extreme tax on physical endurance put on every one during those days. We have no ready explanation for the low incidence of influenza and pneumonia in hospital corps men, other than the extreme care taken to protect them by means of instruction, masks, cubicling in barracks and mess table screens. The possibly less intimate contact with patients as compared to physicians and nurses may also offer some explanation. Further, men were instructed to report sick on first symptoms of indisposition, and thus serious complications were, for the most part, avoided. In addition, they were old troops, and had been hardened and kept fit by daily drill.

TABLE 2.—COMPARISON OF THE INCIDENCE OF SECONDARY PNEUMONIA IN TROOPS FROM THE CITY AND COUNTRY: BASED ON 8,788 CASES OF INFLUENZA, COMPLICATED BY 2,149 PNEUMONIAS

Source	Per Cent. of Total Influenzas	Per Cent. of Total Pneumonias	Per Cent. Influenzas Developing Pneumonia	Pneumonia Case Fatality per Cent.	Influenza Case Fatality per Cent.
From cities of over 10,000	27.6	18.2	16.0	28.5	4.5
From cities and towns under 10,000	33.3	21.9	16.1	30.9	4.9
From rural districts*	39.1	59.9	37.4	28.9	10.8

* Patients whose occupation was farming or whose address was R. F. D.

Pneumonia was twice as frequent in army nurses as in civilian nurses. The latter were a part of the nursing personnel only for the emergency period of the epidemic. In spite of the utmost care exercised to see that every one went to bed as soon as sick, many army nurses were found ill who had given no heed to warnings and remained on duty through several days of sickness.

TABLE 3.—THE EFFECT OF LENGTH OF SERVICE ON THE INCIDENCE OF INFLUENZA AND SECONDARY PNEUMONIA

	Length of Service		
	One Month or Under	Two Months	Over Two Months
Approximate strength*	8,598	14,857	16,220
Total number of influenza cases	3,184	2,834	3,299
Per cent. of command developing influenza	37	19	20.3
Total number of pneumonia cases	813	645	691
Per cent. of command developing pneumonia	9.4	4.3	4.2
Per cent. of influenza developing pneumonia	25.5	22.7	20.9
Deaths:			
Total	431		203
Per cent. of influenza	7.1		6.1
Per cent. of pneumonia	29.5		29.2
Per cent. of command	1.8		1.2

* Based on weekly headquarters report of mean strength of command.

It was noted during the influenza epidemic that, whereas pneumococci occurred as infecting agents in about one third of the early cases, they gradually gave place to hemolytic streptococci and eventually disappeared entirely. The pneumococcus has been isolated only three times as the cause of disease in a period of two months (January and February, 1919). What led to the disappearance of the pneumococci we do not know. Where did so many hemolytic streptococci come from? Droplet infection as a cause of secondary pneumonia was negligible during the period of prevalent influenza. Practically every bed was cubicled, and everybody wore masks. Moreover, we have repeatedly demonstrated the effectiveness of the mask, as used in this hospital, by coughing into blood agar plates held at various distances from the mouth, with and without masks. Weaver,[5] in a series of extensive experiments, has shown very conclusively the efficiency of the mask in preventing droplet infection. In this camp special care in the boiling of mess equipment has apparently been effective in stamping out small epidemics of tonsillitis in line organizations. Lynch and Cumming[6] have presented statistics to show the reduced incidence of influenza in organizations whose mess equipment was properly sterilized after using. Even with the use of masks there is recognized carelessness in the washing of hands. Undoubtedly the hand to mouth route accounts for the spread of at least some of these infections.

TABLE 4.—THE INFLUENCE OF CONTACT ON THE INCIDENCE OF INFLUENZA AND SECONDARY PNEUMONIA

		Influenza		Pneumonia		Deaths	
Organization	Strength	No.	%	No.	%	No.	%
Total in camp	39,675	9,317	23.4	2,149	5.4	674	1.7
All medical and dental officers	164	42	25.6	9	5.5	2	1.2
All other officers	1,436	95	6.6	22	1.4	0	0.0
Ward men in base hospital	120	14	11.7	3	2.5	1	0.8
Other corps men in base hosp.	455	57	12.0	12	2.6	7	1.5
Army nurses	144	44	30.6	15	10.4	2	1.4
Civilian nurses	121	44	36.3	8	6.6	1	0.8

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3. Opie, E. L.; Freeman, A. W.; Blake, F. G.; Small, J. C., and Rivers, T. M.: Pneumonia Following Influenza (at Camp Pike, Ark.), J. A. M. A. **72**: 556 (Feb. 22) 1919.

4. Wallis: J. Lab. & Clin. Med. **4**: 309, 1919.

5. Weaver, G. H.: Droplet Infection and Its Prevention by the Face Mask, J. Infect. Dis. **24**: 218 (March) 1919.

6. Lynch, C., and Cumming, J. G.: Rôle of Hand in Influenza, Mil. Surgeon **43**: 597 (Dec.) 1918.

LOCALIZATION OF STREPTOCOCCI

There were recently reported a number of wound infections in a clean surgical ward. Cultures were made from the throats and wounds of all patients in that ward. It was found that all of those patients whose wounds were infected by hemolytic streptococci harbored numbers of the same organisms in their mouths, whereas those patients whose wounds were not infected did not have this organism in their mouths at the time. Transfer of organisms from mouth to wound by means of the hands can be considered possible in some cases. A further explanation may be found in the probable occurrence of a transient symptomless bacteremia with portal of entry in the throat and localization at the point of injured tissue in the wound. The fact that blood cultures in all these cases were negative does not exclude the possibility of this route of infection of clean wounds. In one instance a clean abdominal wound had healed and the patient was being prepared for discharge. This wound suddenly broke down, and hemolytic streptococci were recovered. The same organism was also found in the patient's throat.

In another instance, hemolytic streptococci were recovered in pure culture from a small abscess that developed in the arm at the site of an antipneumococcus vaccine injection. This soldier was a carrier of large numbers of hemolytic streptococci in his throat at the time.

TABLE 5.—STREPTOCOCCI IN THROATS IN HEALTH AND IN DISEASE

Condition of Throats	Number of Culture	Total Cultures					
		Showing Streptococci		Showing Hemolytic Streptococci		Having a Growth of 50% Hemolytic Streptococci	
		No.	%	No.	%	No.	%
Normal throats, camp organizations........	3,299	3,044	92.2	1,469	44.5	374	11.4
Normal throats, laboratory det.	1,662	1,371	82.4	741	44.5	169	10.1
Patients with upper respiratory infec.	1,069	1,024	96.1	833	77.9	511	47.6
Patients convalescent from pneumonia.....	203	182	88.6	141	69.4	87	42.8
Patients with empyema...............	739	596	80.6	465	60.2	223	30.1

Cultures on blood agar plates to the number of 6,972 have been made from the throats of both sick and normal individuals. These cultures were taken during a period of several months, and included patients in the hospital and members of other camp organizations. The principal fact brought out was that many normal as well as ill persons are carriers of hemolytic streptococci, and that the significant observation lies not merely in the presence of the hemolytic streptococcus, but rather in knowing in what numbers it occurs. For this reason an endeavor has been made to ascertain the percentage of throats showing on culture over 50 per cent. of hemolytic streptococci. This estimation was made in each case, after a rough determination of the total number of colonies growing on blood agar plates, by calculating the percentage of hemolyzing colonies with streptococcic characteristics. The importance of this distinction was made apparent in the summer of 1918, when the small number of hemolyzing colonies on plates was striking, whereas during the fall and winter it has been not unusual to find from 60 to 80 per cent. of hemolytic streptococci in so-called normal mouths.

In our experience, hemolytic streptococci are rarely found in the nose. From the posterior pharyngeal wall and sputum they may be recovered in a considerable number of cases. The tonsil plays the most important rôle in harboring this organism. Many careful cultures from the tonsils of normal persons not particularly exposed to patients ill with streptococcic infections have shown hemolytic streptococci in 90 per cent. of cases. On the other hand, we have only occasionally found them in the throats of those who have had their tonsils removed. Hemolytic streptococci have been recovered from the depths of 80 per cent. of tonsils examined after operative removal. These results are in line with those of Nichols and Bryan.[7] In some cases we were surprised to find hemolytic streptococci in throats from which tonsils were said to have been removed. These patients were examined by a throat specialist, and in every instance some remaining tonsillar tissue was found.

LESIONS PRODUCED BY STREPTOCOCCI

Lungs. — Sixty-eight per cent. of all streptococci recovered in the last fourteen months were from patients with acute pulmonary infections. In these cases bronchopneumonia has been an invariable finding. The organism was identified either from the lung at necropsy or in the sputum during life. Moreover, 70 per cent. of all the pneumonias occurring in this camp have been of streptococcic origin.

Pleura.—Likewise by far the greatest number of pleural infections have been produced by the streptococcus. Coincident with the bronchopneumonias of the winter of 1918, very acute and fatal suppurative pleurisies were encountered. In many instances it was impossible to say which process preceded the other. Strikingly different were the pleural infections encountered in the wake of the influenza epidemic. The proportion of all pneumonias developing fluid in the chest was nine times as great during January, February, March and April as in the month of October, 1918. Pneumonia definitely preceded the appearance of fluid in the latter group of cases. Unlike also were these two periods in the course and outcome of their pleural infections. Pleuritis following influenza ran a much less violent course and was accompanied by a lower mortality. It should be noted, however, that the average duration of life in fatal cases during the epidemic was from six to ten days, and many patients died in from one to three days after the onset of pneumonia, a period of time too short to allow of the development of lesions such as empyema, which ordinarily require a longer time to become clinically evident.

Blood.—The infrequency of septicemia accompanying other localizations of streptococci in the body has frequently invited remark. On many occasions, organisms have been recovered from the blood at necropsy which repeated cultures had failed to reveal during life. An exception to this has been found in cases of mastoiditis. In this condition, 30 per cent. of blood cultures have yielded *Streptococcus hemolyticus.* Recently several strains of hemolytic streptococci have been recovered from blood cultures which grew distinctly better at low oxygen tension. Without the routine use of anaerobic plates, one of these organisms would never have been isolated.

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[7] Nichols, H. T., and Bryan, J. H.: The Tonsils as Foci of Infection, J. A. M. A. 71: 1813 (Nov. 16) 1918.

SEROLOGIC CURE (?) IN THE LIGHT OF INCREASINGLY SENSITIVE WASSERMANN TESTS

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Among recent modifications of the Wassermann reaction which are accepted today as adding to the refinement and delicacy of the test are the employment of cholesterin-sensitive antigens and the fixation of the complement under conditions of cold rather than as was originally carried out at 37 C. in the thermostat. In 1912-1913, McNeil,[1] employing comparative tests with incubation at 37 C. and at ice-box temperature, showed an increase of more than 10 per cent. in delicacy of the low temperature over the high. These results were substantiated by Coca and L'Esperance,[2] and in a large series of cases more recently by Smith and MacNeal.[3]

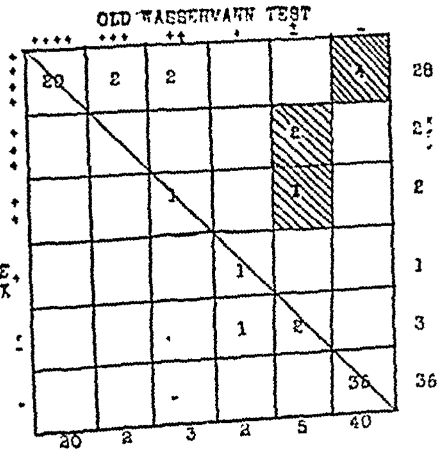

Chart 1.—Primary syphilis: Wassermann reaction in seventy-two cases on admission; shaded figures (seven cases) would have passed as negative with old Wassermann test.

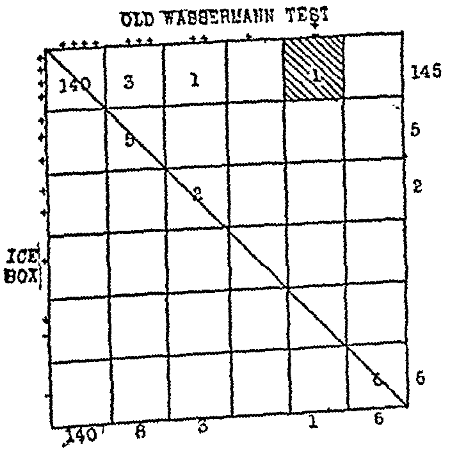

Chart 2.—Secondary syphilis: Wassermann reaction in 158 cases on admission; shaded figure (one case) would have passed as negative with old Wassermann test.

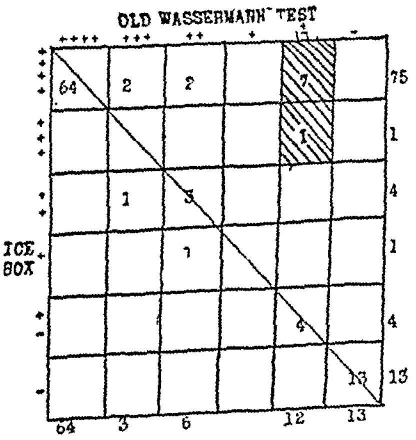

Chart 3.—Tertiary syphilis: Wassermann reaction in ninety-eight cases on admission; shaded figures (eight cases) would have passed as negative with old Wassermann test.

These authors conclude that the use of simple alcoholic antigen with the first incubation carried out in the ice-box is more sensitive in the detection of syphilis than the use of cholesterin-reinforced antigen with incubation at 37 C. or simple alcoholic antigen at 37 C.

During the past eighteen months, comparative tests have been made in the University Hospital on syphilitic and controlled serums with the use of the old Wassermann test, employing cholesterin-sensitive antigens with incubation at 37 C., and the same antigen with incubation at ice-box temperature for sixteen hours. The number of tests carried out under these conditions goes into the thousands. For the purpose of this study, however, we have selected 459 cases of syphilis in all stages, in which, on entrance, a clinical diagnosis was made and in which both tests were done. Of this number, all may be used for the purpose of studying the comparative delicacy of the two tests during the various stages of the disease. In Charts 1, 2, 3 and 4 are tabulated comparative results of the two tests.

In primary syphilis, of which seventy-two cases were admitted, it will be seen by consulting the charts that seven would wholly have been missed if dependence had been placed on the old test. Equally uniform findings in both tests are noted in twenty, four plus positives and thirty-six negatives. Of interest in this group, therefore, are the seven cases in which antibodies were demonstrated earlier in the ice-box than by the older test.

Under secondary syphilis, with lesions in full bloom, there were studied 158 cases (Chart 2). As might be expected, in this group there was *great uniformity* in the findings; there was only one case which reacted strongly positive to the ice-box and doubtful to the old test.

Under tertiary syphilis, there were studied ninety-eight cases. In this group (Chart 3) it is noticed that eight cases gave a doubtful reaction with the old test and therefore would probably have been passed as negative, whereas they are strongly positive with the ice-box test. Thirteen cases of this group were uniformly negative in both, and sixty-four were positive to the same degree in both.

One hundred and thirty-one cases of syphilis in the latent period are illustrated in Chart 4. It is interesting to note that in this group of cases, seven would have been passed as either negative or cured cases on the basis of the old test, while giving a strongly positive reaction with the more sensitive ice-box test. In this chart is also illustrated a degree of sensitiveness in twenty-eight cases in favor of the cold method.

To sum up, therefore: Of 459 cases of syphilis in all stages, incubation of the serums in the cold was found to be uniformly more sensitive than incubation at 37 C., and of this group of cases twenty-two, or about 5 per cent., would have been deemed nonsyphilitic or cured, if the diagnosis had depended on the Wassermann test as carried out in the thermostat.

Turning now to the cases which we have been able to observe over the period of eighteen months, there are available for close scrutiny only thirty-nine in which we are satisfied that intensive therapy was carried out, and in which repeated tests were made. The treatment instituted in all these cases has been in the form of courses of arsphenamin or neo-arsphenamin, no patient having received less than six injections and

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1. McNeil, Archibald: Dept. of Health, City of New York **7**: 325, 1912-1913.

2. Coca, A. F., and L'Esperance, E. S.: A Modification of the Technic of the Wassermann Reaction, Arch. Int. Med. **11**: 84 (Jan.) 1913.

3. Smith, J. W., Jr., and MacNeal, W. J.: J. Immunol. **2**: 75 (Dec.) 1916.

most of those under discussion here having received two such courses, together with intensive mercurialization over a greater portion of the period of observation with inunctions or injections.

From a study of Charts 5 and 6 it will be noted that of thirteen cases of secondary syphilis on admission, in only one case is any difference to be noted in the reaction of the serum in both tests. After treatment, however, it will be noted (Chart 6) that eight cases became negative or doubtful and have remained so with the old test while still giving a strongly positive reaction to the ice-box test.

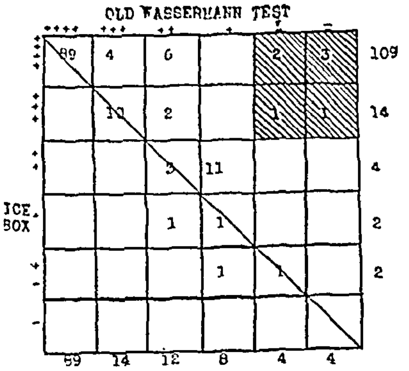

Chart 4.—Latent syphilis: Wassermann reaction in 131 cases on admission; shaded figures (seven cases) would have passed as negative with old Wassermann test.

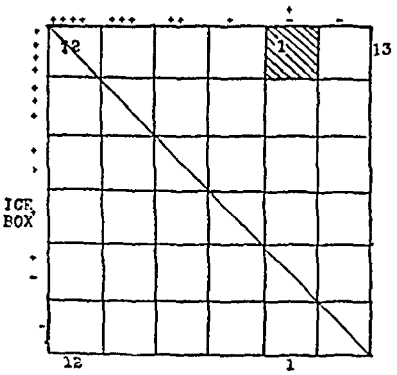

Chart 5.—Thirteen treated cases of secondary syphilis on admission: Shaded figure (one case) would have been considered doubtful on admission on basis of old Wassermann test.

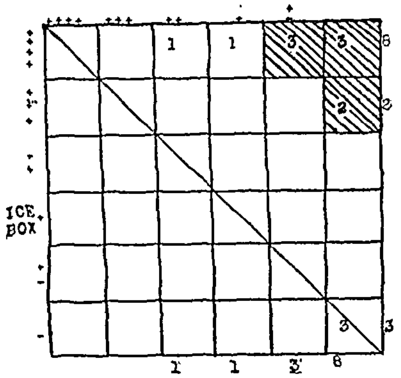

Chart 6.—Thirteen treated cases of secondary syphilis after treatment: Shaded figures (eight cases) would have been considered as cured on basis of old Wassermann test.

In the group of tertiary syphilis cases studied over this period in which treatment has been instituted and the patients have been under careful and frequent observation, there are sixteen cases. Of these (Chart 7), on admission four, by reason of negative tests with the old Wassermann, might well have escaped recognition. These four gave strongly positive reactions in the ice-box. After treatment, however (Chart 8), a great degree of divergence is noted in these cases. Nine became negative or doubtful and would thus be considered as progressing toward serologic cure and by some perhaps cured, whereas all of these still give strongly positive reactions in the ice-box test. A further study of the chart reveals on the part of the five other cases a gradual approach toward the negative phase with the old test, with little or no difference in the intensity of the reaction with the ice-box. Two cases became uniformly negative with both tests.

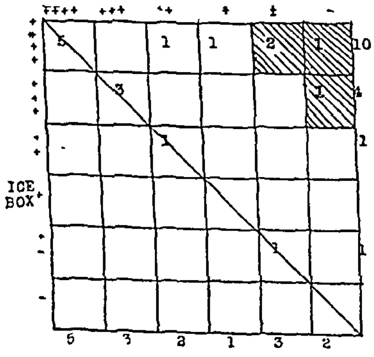

Chart 7.—Sixteen treated cases of tertiary syphilis on admission: Shaded figures (four cases) would have been considered doubtful on admission on basis of old Wassermann test.

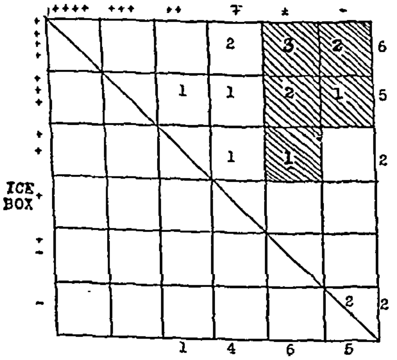

Chart 8.—Sixteen cases of tertiary syphilis after treatment: Shaded figures (nine cases) would be considered as cured on basis of old Wassermann test.

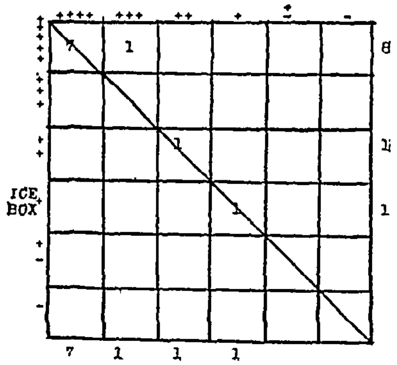

Chart 9.—Ten treated cases of latent syphilis on admission: uniform findings in both tests.

Of the group of latent cases, only ten were available as having been assiduously treated and frequently tested over the period of observation. Of these, on admission (Chart 9) a uniform finding is noted by both tests in all cases. After treatment, however (Chart 10), it will be noted that five cases became negative or doubtful with the old test and thus might have been considered as cured or approaching serologic cure, whereas the ice-box test revealed them as still strongly positive. This chart illustrates, as does Chart 8, the gradual diminution of sensitiveness in the old test in the remaining cases as against practically constant, intensely positive, reactions as shown by the ice-box test.

To sum up, therefore, it would appear to us that in a total of thirty-nine cases, treated over the period of eighteen months, only six cases have become serologically negative with the ice-box test, as against twenty-two, or more than 50 per cent., which became apparently negative with the old test.

The modern methods of carrying out the Wassermann reaction are today, under all conditions, far more sensitive than those which were used in the early days of serologic examination. Each year some refinement of the technic brings to light more and more positive cases which, under previous conditions, would have been negative, and it seems quite reasonable to us to predict that the last word on the subject is yet far off. It is even justifiable to assume that within a short time a test more sensitive than that carried out in the ice-box may be elaborated.

When one compares the relative sensitiveness of older tests with those employed today, and the ever increasing refinements, it becomes apparent that at best our laboratory methods are crude means to detect chemical and physicochemical changes taking place in the cells of the body after infection.

As a diagnostic aid, the positive Wassermann reaction still stands as our greatest aid and a tremendous step forward in the uncovering of syphilis. It has long been taught, and until recently we shared with others the belief, that the goal to be attained in the treatment of syphilis is the conversion from a positive to a negative phase in the blood test. We are fast being converted to the view that, excepting in the small group of early cases in which positive tests are never elicited and the cases are aborted, to attempt this end is, as it were, chasing a shadow.

Until more is known about the nature of this reaction, as to whether it is caused by antibodies or immune substances, it seems to us that there is equally less justification to attempt or to expect well established positive cases to become permanently negative.

We are convinced that in the presence of an intensive therapy, a positive test does not necessarily mean *living spirochetes and potential syphilis any more than* a positive tuberculin test in an individual who has had tuberculosis would indicate the presence of living tubercle bacilli.

With the ever increasing discrepancies reported with each refinement of the Wassermann test; with the ever increasing number of permanently positive cases, previously regarded negative, it appears to us that as a guide to therapeusis, the Wassermann reaction does not have a leg to stand on.

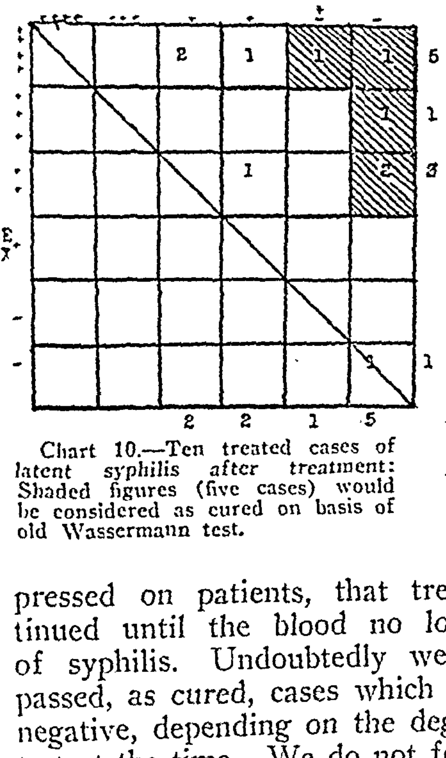

Chart 10.—Ten treated cases of latent syphilis after treatment: Shaded figures (five cases) would be considered as cured on basis of old Wassermann test.

We stand today, with regard to the criteria of the treatment and cure of syphilis, as did the syphilologists of the pre-Wassermann day.

Until recently we have taught, as have all others, and have impressed on patients, that treatment must be continued until the blood no longer shows evidences of syphilis. Undoubtedly we, as all others, have passed, as cured, cases which have been recorded as negative, depending on the degree of delicacy of the test at the time. We do not feel that these cases are necessarily not clinically cured, although modern tests would show many surely as positive.

Whatever intensive treatment has been directed toward the eradication of the Wassermann reaction has undoubtedly been well directed toward the eradication of the disease.

In the light of our real ignorance of the nature of the reaction, particularly in the interpretation of late persistent tests, we submit that serologic and clinical cure are not necessarily parallel. Energy of treatment directed toward the end of attempting to make a persistent positive react negatively may well be not only useless but misdirected.

The Laborer's Health.—On the health of the nation depends the efficiency of labor, and the economic value of the laborer is one of the arteries of commerce.—Arthur E. Holder.

SUGAR TOLERANCE IN CANCER*

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The insidious onset of a malignant tumor with the lack of positive evidence, in the majority of instances, until the case is far advanced, is perhaps the greatest difficulty in the way of a decided reduction in cancer mortality. Certain well established facts of cancer etiology may be briefly stated in order to explain the basis of the experiments of which this paper constitutes a preliminary report.

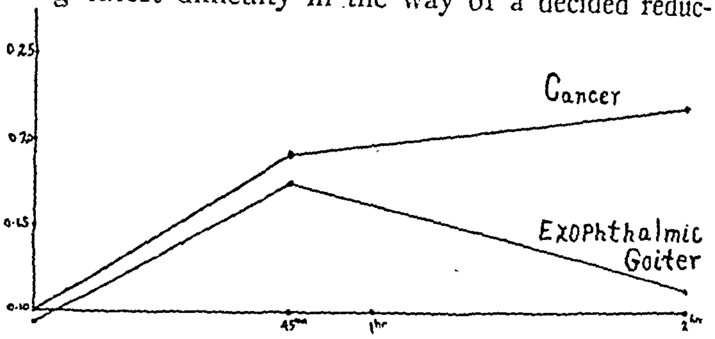

Chart 1.—Comparison of the curve of sugar tolerance in exophthalmic goiter and in cancer. *In this and in the subsequent charts the ordinates give the sugar percentages per hundred c.c. of blood, while the abscissas indicate the zero hour, forty-five minutes, and one and two hours, thereafter.*

Broadly speaking, the development of malignant tumors rather frequently follows irritation, though no irritant is specific. It is generally accepted that not every one exposed to the action of any given irritant develops a tumor. In other words, there is an apparent predisposition as well as an actual inciting irritant. Again, broadly speaking, since exact statements are not possible in the present state of our knowledge, this predisposition becomes more evident at a certain period in life, a period spoken of as the cancer age, and demonstrable in animals as well as man.[1] Not a few investigators have attributed cancer development to faulty function of the endocrine glands, one or the other gland being held responsible. So far there has been no positive evidence produced that will support this hypothesis. There are no specific lesions demonstrable in the endocrine glands of mice with spontaneous tumors[2] nor does extirpation or the feeding of one or more of these glands have any apparent influence on the rate of growth, infectivity, or immunity against animal tumors.[3]

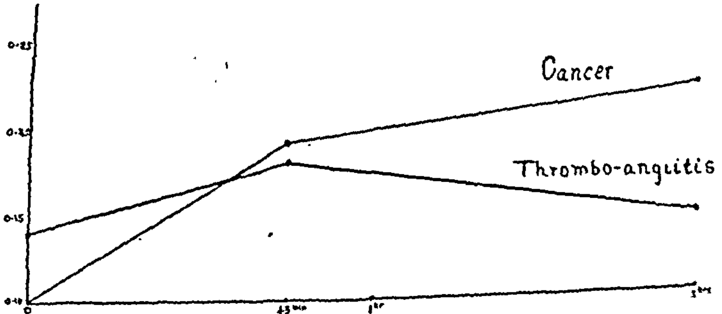

Chart 2.—Comparison of the curve of sugar tolerance in thrombo-angiitis and in cancer.

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* From the Pathological Laboratories of the Lenox Hill Hospital.

[1] Murray: Proc. Roy. M. & Chir. Soc., Series B, 84:42, 1911-1912. Slye: J. Cancer Res. 1:479, 1916.

[2] Rohdenburg and Bullock: J. Med. Res. 33:147, 1915.

[3] Rohdenburg, Bullock and Johnson: Reports of George Crocker Special Research Fund 3:87, 1913.

Nevertheless, it is possible that there may be derangement of endocrine function not demonstrable by histologic or surgical technic. The functional activity of some of the endocrine glands can, to some extent, be measured by the sugar tolerance test first brought into clinical use by Jacobsen[4] in 1913. With this method Janney and Isaacson[5] have demonstrated that the removal of the thyroid in dogs is followed by a hypoglycemia. Other clinicians have applied the test in a variety of conditions, among which may be mentioned diabetes, nephritis, exophthalmic goiter, pituitary disease, myxodema and thrombo-angiitis obliterans. In some of these diseases typical curves of no inconsiderable value in diagnosis have been established though unfortunately not applied clinically with the frequency which the importance of the data so obtained warrants.

Following the method as outlined in a succeeding paragraph we have obtained values apparently constant in cancer, which may ultimately prove of value in diagnosis. It is for this reason that a preliminary report is made.

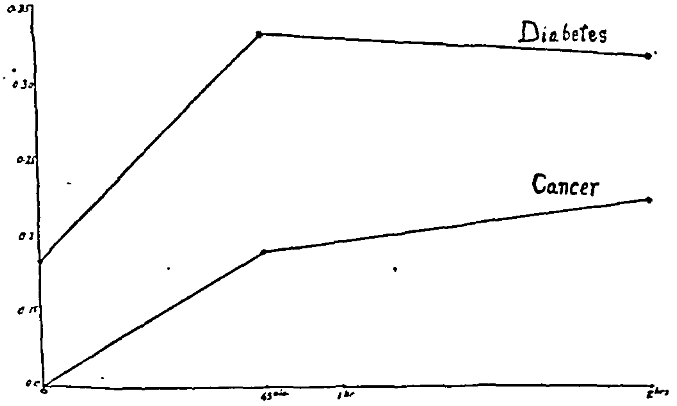

Chart 3.—Comparison of the curve in diabetes and in cancer. Note that the diabetic curve starts at a higher point and commences to fall at the second hour, whereas the cancer curve does not.

TECHNIC OF THE TEST

In the morning, after a night's fast, the individual is given either 100 gm. of anhydrous or 115 gm. of syrup glucose dissolved in 300 c.c. of tea or coffee without milk or sugar, care being taken that the glucose is all dissolved and that the patient takes the entire amount. Just before giving the glucose, and again forty-five minutes and two hours after its ingestion, blood is withdrawn and the amount of sugar in it is determined by the method of Lewis and Benedict as modified by Meyers. At the same time periods the urine is qualitatively examined for sugar by the method of Benedict.

The epinephrin method may also be employed by giving 1 c.c. of a 1 : 1,000 solution of epinephrin hydrochlorid subcutaneously instead of administering glucose. All other manipulations are identical with the glucose procedure.

The normal curve of sugar tolerance as well as the curve in some diseases other than cancer is graphically portrayed in Charts 1, 2, 3 and 4 and needs no amplification here.

The cancer curve in contrast to the curve observed in other diseases starts with a normal blood sugar, 100 mg. per hundred c.c. of blood; rapidly rises so that forty-five minutes after the ingestion of glucose 180 or even 200 mg. per hundred c.c. are present, and two hours after the glucose is ingested the blood sugar is either as high as at forty-five minutes or higher, reaching 288 mg., and in one instance 350 mg. per hundred c.c. of blood. The percentage of blood sugar gradually falls and approximates normal in from three to four hours after the ingestion of the glucose. The average of four curves in which specimens of blood were taken up to three hours is shown in Chart 5. This curve was present in our limited experience in twenty-four cases of carcinoma and one of sarcoma and does not occur in some forty cases of other diseases which we have examined. The curve covering the use of epinephrin instead of glucose is identical with the curve following the ingestion of glucose.

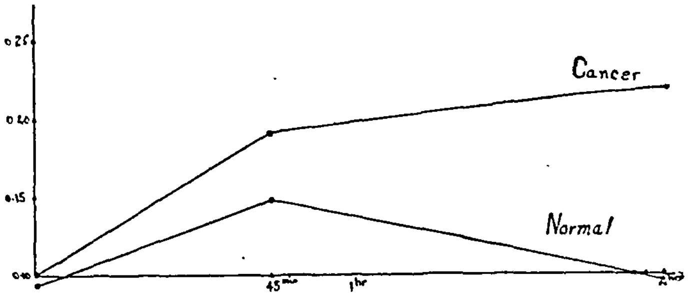

Chart 4.—Comparison of the cancer curve with the curve in normal individuals.

The sugar present in 100 c.c. of blood at the zero hour and at forty-five minutes and two hours after ingestion of glucose as it occurred in twelve cases is presented in the accompanying table. The sugar tolerance bears no relation to the location of the tumor, for primary carcinoma of the lung, carcinoma of the sigmoid, of the stomach, and of the breast and other organs, all give the same type of reaction.

Even with the high blood sugar present in these cases, sugar appeared in the urine rather infrequently, only 41 per cent. of the cancer cases showing sugar.

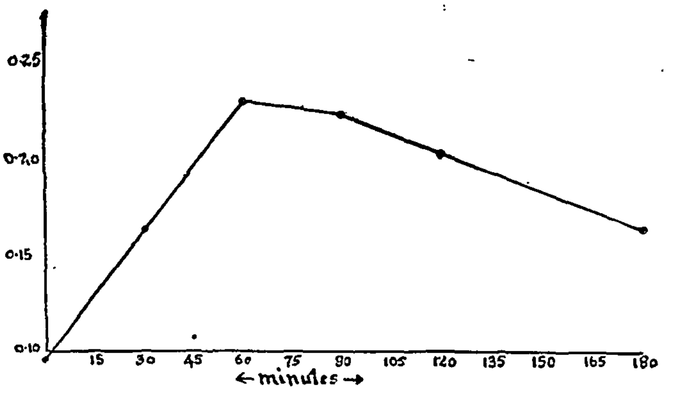

Chart 5.—Cancer curve based on four cases. The abscissas indicate the time period in minutes.

The value of the test is well shown in two of the cases of the series. Others could be quoted but these serve the purpose:

Case 1.—A man, aged 47, about three years before admission to the hospital had, without apparent reason, commenced to cough, having had no previous pneumonia, pleurisy, nor other pulmonary condition. This cough persisted. In one hospital a diagnosis of probable lung abscess was made, possibly because of the type of sputum and the accompanying temperature. This abscess was thought to be possibly of tuberculous nature, though this could not be positively asserted. He then went to a sanatorium for tuberculosis where the diagnosis of bronchiectasis was made. He was then referred to Dr. Willy Meyer for operation. An exploratory puncture of the supposed bronchiectasis was made and pus was found. Operation immediately followed puncture and a pus sac was drained. Previous to puncture, roentgenograms showed a thickened pleura. The sugar tolerance curve was characteristic of tumor. The patient survived operation three days. At necropsy an adenocarcinoma arising from the bronchial epithelium was found. The tumor measured approximately 5 cm. in diameter and partially compressed the bronchi of the right lung, causing aneurysmal dilatation of the bronchi.

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[4] Jacobsen: Biochem. Ztschr. 56: 471, 1913.

[5] Janney, N. W., and Isaacson, V. I.: The Blood Sugar in Thyroid and Other Endocrine Diseases, Arch. Int. Med. 22: 160 (Aug.) 1918.

In contrast to this case, a second would appear to illustrate the value of a negative curve:

Case 2.—A woman, aged 55, gave a typical history of gastric carcinoma situated at the pylorus. A roentgenogram disclosed almost complete obstruction at the pylorus and according to the roentgenographer a new growth was present extending from the pylorus toward the cardia, involving approximately the distal third of the stomach. Gastric analysis showed no hydrochloric acid. Lactic acid was present and Boas Oppler bacilli and blood were present. The sugar tolerance curve was that of a normal individual. After operation the blood gave a Wassermann + + + +. At operation, the entire pylorus, as well as the involved portion of the stomach wall, was resected. Microscopic examination failed to show any evidence of cancer, but did show a typical gumma and the perivascular round-cell infiltration of syphilis. Spirochetes were not demonstrable.

SUGAR PRESENT AT VARIOUS TIME PERIODS BEFORE AND AFTER INGESTION OF GLUCOSE

Diagnosis	Blood Sugar			Urinary Sugar		
	Before Glucose	After Glucose		Before Glucose	After Glucose	
		45 Min.	2 Hr.		45 Min.	2 Hr.
	%	%	%	%	%	%
Carcinoma of stomach....	0.120	0.144	0.232	0	0	0.3
Carcinoma of stomach....	0.108	0.228	0.288	0	0	2.0
Carcinoma of stomach....	0.114	0.240	0.272	0	0	0
Carcinoma of stomach....	0.106	0.100	0.192	0	0	0.9
Carcinoma of uterus.......	0.138	0.174	0.164	0	0	0
Carcinoma of sigmoid.....	0.123	0.158	0.189	0	0	0
General carcinomatosis ...	0.096	0.204	0.215	0	0	0
Carcinoma of stomach....	0.116	0.168	0.230	0	0	0
Carcinoma of stomach....	0.078	0.215	0.210	0	0	0
Carcinoma of esophagus..	0.082	0.160	0.220	0	0	0.7
Carcinoma of stomach....	0.120	0.240	0.156	0	0	0
Carcinoma of stomach....	0.105	0.275	0.245	0	0	1.0
Sarcoma of femur.........	0.980	0.170	0.220	0	0	0

We prefer for the present not to theorize on the etiologic significance of the phenomenon so far observed; the possibilities are numerous, and theoretically one explanation is as good as another, nor shall we at this time venture an explanation of the mechanism of the occurrence, contenting ourselves rather with recording the phenomenon so that repetition in other hands than ours may more rapidly prove or disprove its value as a diagnostic test.

Defective Development of the Blood.—Pittaluga's term, "hemodystrophies," has been widely adopted to indicate defective formation of blood and the evils resulting therefrom. The biochemical alterations may predominate over the histopathologic, and there may be a more or less accentuated neuropathic factor, direct or indirect, through the mediation of the glands of internal secretion. Hereditary or familial factors may intervene directly or indirectly. Purpura, hemophilia, hemolytic jaundice, hemoglobinuria and the hemorrhagic diathesis can all be classed in the four main groups of the hemodystrophies: those with a hemorrhagic diathesis, with a tendency to polycythemia, to chlorosis, and the diathesis showing a tendency to eosinophilia. As he describes in the *Siglo Medico*, Nov. 16 and 23, 1918, pp. 939 and 956, these hemodystrophies reveal an intimate connection between the blood-producing organs and the endocrine system, and show the important part played by heredity.

THE NOSTRUM AND THE PUBLIC HEALTH *

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Broadly speaking, the nostrum belongs in one of two general classes; one class comprises those unscientific mixtures that are advertised primarily to the medical profession, and first reach the public by way of the prescription; the other class includes those mixtures that are sold direct to the public. Nostrums in the first class are sometimes spoken of as "proprietaries"; those in the second class are colloquially known as "patent medicines." The public suffers from both classes, the only difference being that in the case of the former the physician has to share the responsibility with the nostrum exploiter. There is no clearly defined line of demarkation between these two classes. Many of the "patent medicines" of today were the "proprietaries" of yesterday. Shrewd manufacturers—or, more correctly, exploiters, for many of these products are not manufactured by those that sell them—discovered years ago that one of the least expensive methods of introducing a nostrum to the public was by way of the medical profession. After the profession had been widely circularized and much space bought in the advertising pages of medical journals of a certain type; after uncritical or unthinking physicians had prescribed the products (of course in the "original package" with the name blown in the bottle or a monogram stamped on the tablet); after the patient had learned with disgust that his physician had merely prescribed a "patent medicine" that could more cheaply have been purchased direct—then the one-time "proprietary" threw off its "ethical" mask and became frankly a "patent medicine." Such has been the genesis of many a "patent medicine" on the market today. Others, less deviously, have gone directly to the public at the outset.

FEW, IF ANY, REAL PATENT MEDICINES

The present paper deals with the "patent medicine" evil. Correctly speaking, there are practically no true patent medicines on the market; first, because few if any of the products of this type could be patented, and second, because patency or openness is the last thing the average "patent medicine" seller wants. Mystery and secrecy are his great assets. A product to be patentable must, according to the law—not always enforced, by the way—represent something new and useful; and this requirement of the patent law rules out the "patent medicine." A patent when granted gives the owner a legal monopoly on his product for seventeen years, after which time the product becomes public property. The "patent medicine" seller finds it easier and far more profitable to put together a simple mixture of drugs that represents nothing either new or useful, to which he gives a fancy name, and obtains a trade-mark on that name. The trade-mark gives him a perpetual monopoly to the name and places no restrictions on the composition of the product; nor, in the granting, is he required to give any information regarding its composition.

Thus "Winslow's Soothing Syrup" is still "Winslow's Soothing Syrup" in name, although the product on the market today bears but little resemblance to the original preparation sold under that name. As sold in the United States, it used to contain morphin and alcohol. As sold in Great Britain, potassium bromid was substituted for morphin because the British law requires the word "poison" on all "patent medicines" containing morphin. As the public in our country became aroused to the menace of the "baby killers," many drug stores refused to handle the Winslow preparation. Then the formula was changed, and changed again, so that today it contains neither morphin nor alcohol. But it is still "Winslow's Soothing Syrup."

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* Read before the Chicago Medical Society, March 26, 1919.

THE FOOD AND DRUGS ACT

There has been a tendency during the past few years to assume that the federal Food and Drugs Act, commonly known as the Pure Food Law, effectively safeguards the public against the menace of the nostrum. Although this law has been in force for more than twelve years, there is still some misapprehension of its powers and limitations. First it should be realized that the law applies only to products that enter into interstate commerce; that is, those that are made in one state and sold in another. The federal Food and Drugs Act, for instance, exercises no control over the sale of "patent medicines" made in Illinois and sold anywhere within the state of Illinois, no matter how fraudulent the claims may be as to therapeutic effects, composition, or source of origin. The only way such preparations can be reached is under the state law.

It should also be realized that the Food and Drugs Act has no jurisdiction over claims made for foods or drugs except as those claims appear in or on the trade package. When the law was first passed, many "patent medicine" makers assumed that the term "label," as used in the Act, applied solely to the piece of paper pasted on the bottle. On this assumption, they modified the false claims they had been making on the label but continued to falsify in the circulars that were wrapped around the bottles. They soon found to their cost, however, that the courts gave a broader and more logical meaning to the word "label," including all of the printed matter in or on the trade package. The Food and Drugs Act exercises no control over statements that are published separate from the trade package—such as in newspapers, hand-bills, etc.

The Pure Food Law, as first enacted, prohibited, within the field it covers, "false or misleading" statements "in any particular." The officials entrusted with the enforcement of the Act assumed that this meant just what it said, and the majority of the "patent medicine" makers followed that assumption. Then the Supreme Court decided (in a divided opinion) that the law as it stood did not apply to statements regarding curative effects, but only to statements relative to composition and origin. This decision, of course, let down the bars immediately to the most obvious frauds. The more unscrupulous "patent medicine" makers care little about restrictions regarding the composition of their nostrums; they are much more concerned with being free under the law to make any assertion they see fit regarding the curative effect of their preparations. Then came the Sherley amendment to the Food and Drugs Act, which specifically prohibits "false and fraudulent" statements regarding the curative effects of medicines. It is to be noted that falsehood alone is not sufficient to secure conviction; the manufacturer must also be found guilty of deliberate intent to defraud.

Under the Food and Drugs Act, then, the manufacturer of a medicinal product may be declared guilty of misbranding, if the statements he makes (on the trade package) regarding the composition or the origin of his products are either "false or misleading"; he may also be found guilty of misbranding if the statements he makes (also, on the trade package) regarding the curative effects of his preparations are both "false and fraudulent."

Limiting the scope of the application of the law to the claims made on the package, is one of the fundamental weaknesses of the Food and Drugs Act. The law does not penalize the most outrageously false claims of any kind or description regarding "patent medicines," if those claims appear in newspaper advertisements, circulars, etc., that do not accompany the trade package. Yet it is the newspaper advertisement or the circular that sells the product, rather than the matter on the trade package, which the public does not see *until after it has purchased*. Thus we have the anomaly of a law which allows a manufacturer to lie to his heart's content in those avenues of publicity in which lying will be most profitable and do the maximum amount of harm, and restricts merely the statements he may make in his trade packages. This limitation in the Food and Drugs Act furnishes a sure way of determining with almost mathematical accuracy what statements regarding a "patent medicine" are false: From the claims made in the newspaper advertisements and circulars subtract those that are made in the trade package; the difference, you are justified in assuming, is falsehood!

LIMITED FORMULA DISCLOSURE

The "Pure Food Law" has one more power in protecting the public against the nostrum evil: It requires "patent medicine" sellers to declare (on the trade package only) the presence and amount of eleven drugs and their derivatives: alcohol, morphin, opium, cocain, heroin, alpha-eucain and beta-eucain, chloroform, cannabis indica, chloral hydrate and acetanilid. Further than this, the law permits the manufacturer to maintain complete secrecy regarding the composition of his preparation. He can, if he wishes, put in his product such deadly poisons as carbolic acid, arsenic, strychnin, prussic acid and aconite, and the public is none the wiser.

Many people have thought that the legend "Guaranteed under the Food and Drugs Act" that used to appear on bottles and cartons indicated that the federal government had in some way passed on the product and given it a clean bill of health. Nothing of the kind. Before the guarantee clause was abolished, any manufacturer could write into Washington and ask for a serial guarantee number, and Washington had no choice but to issue such a number—this, no matter whether the medicinal product was good, bad or indifferent, whether the claims under which it was sold were truthful or false or whether the drugs it contained were harmless or dangerous. All that the guarantee clause ever meant was that were the product sold in violation of the law, the person to whom the guarantee serial number had been issued would be held responsible, rather than the individual retailer. Some of the most outrageous swindles in the "patent medicine" world have been "Guaranteed under the Food and Drugs Act." Summed up, then, it may be said that the federal Food and Drugs Act gives the public a certain measure of protection. It permits the public to know the names and amounts of eleven drugs and their derivatives, and it limits the claims that can be made for these products, so far as such claims appear in or on the trade package.

THE PHYSICIAN'S INTEREST IN THE NOSTRUM EVIL

The nostrum evil is essentially a public health question, although, as in the case of many public health questions, it has its economic angle. The "patent medicine" maker persistently charges that the medical profession's opposition to "patent medicines" as now exploited is based on the assumption that the sale of such products diminishes the income of the physician. The charge, of course, is as malicious as the assumption is false. Next to the "patent medicine" men and the newspapers that share the profits of nostrum exploitation, no class receives greater financial benefit from "patent medicine" advertising than physicians. A hundred people see an advertisement of "Doan's Kidney Pills," with its "Every Picture Tells a Story" illustration conveying the impression that an ache or pain in the lumbar region indicates kidney disease. Out of this hundred, let us suppose one half, because of some passing pain in the lumbar region, are convinced that they have Bright's disease or some kidney ailment. Of the fifty thus frightened into the belief that they are ill, it may be conservatively claimed that considerably more than half will go to their family physician rather than to the drug counter. If all "patent medicine" advertising were abolished tomorrow, next to the exploiters of "patent medicine" and some newspaper proprietors, no one would suffer larger financial loss than the physician. The physician, of course, is opposed to the average "patent medicine" because it is exploited in such a way as to cause the public to magnify its trivial ailments, to drug itself unnecessarily and in cases in which something serious is the matter to lose vitally valuable time in seeking medical aid. Were the physician's attitude toward "patent medicines" prompted by commercial considerations he would say to the nostrum exploiter, "Go the limit; the more victims you get, the more patients I get!"

AN ECONOMIC EXCUSE FOR HOME REMEDIES

Under our present economic system there is a place for home remedies for the self-treatment of simple ailments. It may be that in Utopia the ailing always go to their medical advisers, no matter how trivial the ailment; but this is not Utopia. No one expects every person who suffers from a passing attack of constipation to go to his physician for a prescription. He is going to the drug store for a cathartic of some kind. Admitting that the abuse of cathartics is one of the most widespread and pernicious of the evils of self-drugging, and admitting, further, that the rational treatment of constipation may not call for any purgative drug, the fact remains that in such cases the man in the street is going to take cathartic drugs, at least until he is better informed. The duty of the medical profession in the premises is to warn the public of the danger of the purgative habit and to urge that some restrictions be thrown around the sale of cathartic medicines. The same applies to the use of other medicinal products that may rightly be classed as home remedies.

Unfortunately, the home remedies of today are, generally speaking, "patent medicines"; and the methods of promoting the sale of "patent medicines" make those products a menace to the public health. This not altogether for what the remedies themselves contain, although in many instances that is distinctly bad, but because of the way such products are exploited. Modern advertising differs from that of the mid-Victorian era in one vital respect. In the earlier days the advertiser notified the public where demands might be supplied. Today the advertiser bends his efforts toward making the public demand things which otherwise it would not want or even know about. This principle may have no serious consequences, other than economic at least, when applied to the ordinary commodities of commerce. There may be more or less plausible arguments in favor of so advertising pianos, automobiles, clothes, or what not, as to persuade the public to purchase more of these articles than it really needs or can afford. There can be no excuse, however, for using such methods in the sale of preparations for medicinal purposes. So to advertise as to make well men think they are sick and sick men think they are very sick, for the sole and only purpose of causing them to purchase drugs to pour down their throats, is more than an economic offense; it is a crime against the public health. Yet this is the principle on which the average "patent medicine" of today is sold.

SEQUENCE MISTAKEN FOR CAUSE AND EFFECT

There is an additional reason why the present method of exploiting drugs for the self-treatment of disease is vicious. In the sale of medicaments, we have a class of merchandise that lends itself peculiarly to fraudulent exploitation. The nonexpert who is led by misrepresentation to purchase a piano or a suit of clothes which is not up to the specifications learns sooner or later that he has been swindled, and he profits by the lesson. There is no such automatic check operating in the case of medicaments. John Smith gets up some morning feeling sick. It is but a passing indisposition and in a few days he will be himself again, whether he does something or does nothing in the way of treatment. In opening his morning paper, John finds, carefully detailed, just the symptoms that he seems to have, and he is assured that they may be cured by taking "Pink Pills," "Nuxated Iron," "Tanlac," "Peruna" or what not. On his way down town he buys one of these preparations. In a day or two he is well again—as he would have been in any case—and you never can persuade him that his recovery was due to the healing power of nature and not to the preparation that he had been taking. It is equally true, of course, that had he gone to his family physician and received a prescription or had gone to an osteopath and had his back rubbed, or called up a "Christian scientist" and received an absent treatment, he would also have been willing to credit any one of these agencies with his recovery. The point to be emphasized is that it is a very human tendency to credit to artificial agencies all results that are really due to natural causes. The *post hoc, ergo propter hoc* mode of reasoning is well-nigh universal, especially among those without scientific training. Even we of the medical profession are not altogether free from confusing a mere sequence of events with cause and effect. Here, then, is the reason for urging that in selling medicinal products a different method should be employed from that used in selling ordinary merchandise. The seller of general merchandise has nature as an opponent; wear and tear is constantly against him. The seller of medicaments always has nature as an assistant. The tendency of the human body in sickness is, in the majority of instances at least, to get well; but the healing power of nature seldom receives credit.

THE REMEDY

What, then, is the remedy? Obviously there should be home remedies available that are unobjectionable from the public health point of view. Such products should contain no habit-forming or dangerous drugs; they should not be recommended for diseases that are too serious for self-treatment; they should be nonsecret because the public has a right to know what it is taking; finally, they should not be advertised under false claims or in such a way as to make the public magnify trivial ailments and dose itself unnecessarily with drugs. Products which conform to these requirements are to be found on the shelves of every drug store in the country. They comprise certain simple official products from the United States Pharmacopeia or the National Formulary. Naturally, they are nonsecret, and being official, their standards of strength and purity are constant and enforced by state and national laws.

As most of the large pharmaceutical houses in the country make them, the element of monopoly is removed, and competition assures their being sold at a reasonable profit. The enormous overhead expense inseparable from the modern method of "patent medicine" exploitation is entirely eliminated. John Smith does not realize that when he pays a dollar for "Dr. Quack's Panacea," at least 75 cents of his dollar represents the cost of the effort on the part of Dr. Quack to convince Smith that there is something seriously wrong with him and that "Quack's Panacea" is the only thing that will cure him. In other words, Smith pays a dollar for 25 cents' worth of drugs and service, plus the privilege of being frightened into the belief that he is seriously sick and that these drugs are essential to his recovery.

Since official drugs, i. e., Pharmacopeial and National Formulary preparations, are nonproprietary, the chief incentive to fraudulent or misleading advertising claims is removed. John Doe & Sons' brand of Blaud's pills, differs in no essential respect from the Blaud's pills of Henry Rowe & Co. The margin of profit on the sale of Bland's pills is so small that it would hardly be profitable for one manufacturer to attempt any widespread advertising campaign for the special purpose of increasing the sale of his particular brand, even supposing it were possible for him to make claims that could not demonstrably be proved false.

When the public is properly informed, so that it knows what preparations to call for in order to treat its simpler ailments, advertising of home remedies will be entirely unnecessary. It devolves on the medical profession, and other agencies entrusted with the solution of public health problems, to give the public just these facts. In an article published two or three years ago,[1] Dr. Harvey W. Wiley suggested that the American Medical Association should appoint a representative committee to select a few simple home remedies for what he called the "Mother's Medicine Chest," which could be used by the public for the self-treatment of the milder ailments. He urged, further, that somewhat complete directions should be published, describing the nature of the troubles in which these remedies were to be used, and the amount that was to be given under various conditions, in every case, of course, calling attention to the potential dangers inseparable from self-diagnosis and self-treatment. Whether such a task should be undertaken by a scientific organization such as the American Medical Association, or by governmental agencies such as the United States Public Health Service, is a question. There is little doubt, however, that when such information has been widely disseminated, even if it takes a generation to do it, the making of hypochrondriacs by suggestion, and the widespread evil of unnecessary drugging, will be gone. Gone, too, will be the business of those nostrum exploiters who capitalize human fear and fatten on human credulity.

THE COST OF MALARIA

A STUDY OF ECONOMIC LOSS SUSTAINED BY THE ANDERSON-COTTONWOOD IRRIGATION DISTRICT, SHASTA COUNTY, CALIF.

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I here present a summary of a detailed report that I made to the California State Board of Health, March 1, 1919, concerning the prevalence of malaria in the Anderson-Cottonwood Irrigation District, situated in Shasta County, Calif. The summary presents data as to the economic loss caused by malaria in this district in 1918. The three items of medicine, medical service and labor loss were carefully determined, and were found to average not less than $31.70 per family: in different sections of the district this varied from $1.86 to $75.10 per family per year.

DESCRIPTION OF THE DISTRICT

The Anderson-Cottonwood Irrigation District comprises approximately 32,000 acres of valley and foothill land lying on both sides of the Sacramento River in Shasta and Tehama counties, in the northern part of California. The population of the district is approximately 1,300 persons, of whom approximately 450 live in Anderson town, 200 in Cottonwood town, and the remainder, 650, on farms. The irrigation district was organized in 1914, and the irrigation system was sufficiently complete in 1918 to irrigate the northern half of the district (Anderson and Churn Creek sections) early in that year, and some water reached the southern part (Cottonwood section) late in that season. The water is obtained from the Sacramento River, at head-works located in the town of Redding, and is carried in an open, unlined earth main canal and laterals. The soil varies from loam to gravelly loam; the main canal is located very largely in a porous, open, gravelly loam, for much of its length on a sidehill. As a result, there is a very considerable seepage loss. This seepage from the main canal and laterals has greatly increased existing wet areas, and has caused many new seepage pools and marshes.

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[1] Wiley, H. W.: The Mother's Medicine Chest, Good Housekeeping, October, 1916.

PRESENCE OF ANOPHELINE MOSQUITOES

Inspection has shown that these wet areas are ideal for the breeding of anopheline mosquitoes: in fact, *Anopheles* is the dominant species in this district. Very few places in which *culicines* breed were found. Observations made in previous years as well as in 1918 have shown that *Anopheles quadrimaculatus* is present, and probably *A. punctipennis*. I have not found *A. pseudopunctipennis*. Except in unusual years, mosquitoes did not prove troublesome to the inhabitants until the introduction of irrigation in 1918. Last year practically every one in the irrigated sections complained bitterly about the mosquitoes, and in many places their presence seems to have made life nearly unendurable.

PRESENCE OF MALARIA

Data in my possession seem to show that malaria was present in this part of Shasta County as far back as the early settlement in 1850. Three deaths from malaria were recorded in the county in 1873 (the first county record). There is a gap in the record until 1890, when deaths were again recorded; since 1906, the exact location of death has been entered on the record, and the deaths from malaria in this district were: in 1906, five; 1907, one; 1910, one; 1911, one; 1912, two; 1915, one; 1917, one; and 1918, six.

There is no record of the number of malaria cases in the district in past years. Although the regulations of the state board of health require that malaria be reported, this regulation is not enforced.

FINANCES OF THE DISTRICT

Realizing that the introduction of irrigation would mean a tremendous increase in malaria, already endemic in this district, I made studies in 1918 to determine the facts as basis for control recommendations. Because of the financial condition of the district, a special investigation into the economic loss caused by malaria was made.

The financial aspect of the matter may best be understood when it is known that the district, assessed at $1,538,180.47 in 1918, was bonded for $1,055,000 for the construction of the irrigation system. The irrigation district tax rate in 1918 was $7 on each $100 of assessed valuation, this tax being in addition to county and school taxes. To add an additional tax for malaria control, on top of this already heavy tax burden, would need evident justification if it were to be voted by the people.

METHOD OF INVESTIGATION

In making the investigation, practically every house in the district was visited, and data were obtained from approximately 80 per cent. of the families. Especial care was taken in every case to underestimate, rather than exceed, the probable cost of malaria to the family; large items were checked by corroborative evidence whenever possible. Owing to the conservatism of the investigation, it is practically certain that the costs obtained are less than the actual facts rather than in excess of them. Care was also taken in estimating the number of cases of malaria: many probable chronic cases which exhibited no definite symptoms in 1918 were not included. The investigation included only those items in the total cost of malaria (medicine, medical service and labor loss) which could be ascertained with some degree of certainty.

The item of medicine includes quinin, calomel, prescriptions and "patent medicines" purchased direct by the patients. The item of medical service includes physicians' fees, nurses' hire, hospital expense, and medicine dispensed directly by the attending physician. The item of labor loss includes only the labor loss of the head of the household or other wage-earning member of the family, charged at the prevailing local wage scale of $4 a day. It does not include casual farm labor, as this fluctuated greatly, and comparatively few farm casuals were in the district at the time of investigation (November, 1918, to January, 1919).

TABLE OF COSTS

In the table of costs herewith presented, the district is divided into six sections or groups; Anderson town, Anderson section (west side of the Sacramento River), Churn Creek section (east side of the Sacramento River), Ball's Ferry section (southeastern end of district), Cottonwood town, and Cottonwood section (southwestern end of district). The first three sections comprise the northern half of the district, and were under irrigation in 1918. The last three sections comprise the southern half of the district. Irrigation water reached a limited area in this part of the district late in the 1918 season.

SUMMARY OF MALARIA COSTS IN 1918, ANDERSON-COTTONWOOD IRRIGATION DISTRICT, SHASTA COUNTY, CALIF.

	Anderson Town	Anderson Section	Churn Creek Section	Ball's Ferry Section	Cottonwood Town	Cottonwood Section	Entire District
No. of families....	94	75	19	12	46	14	260
No. of persons.....	379	316	98	54	176	58	1,081
Persons having malaria symptoms in 1918.....	254	207	60	32	25	12	590
Percentage having malaria symptoms in 1918.....	67.0	66.5	61.0	59.0	14.0	20.0	54.5
Persons per family	4.03	4.21	5.16	4.5	3.8	4.14	4.16
Cost of medicines.	$504.25	$736.75	$117.00	$52.00	$56.50	$14.00	1,480.50
Per family.......	5.36	9.82	6.16	4.33	1.23	1.00	5.70
Cost of medical service.........	359.00	1,220.00	79.00	69.00	100.00	12.00	1,839.00
Per family.......	3.83	16.28	4.16	5.75	2.18	0.86	7.10
Labor loss*........	948.00	3,684.00	218.00	60.00	0	0	4,910.00
Per family.......	10.10	49.10	11.48	5.00	0	0	18.90
Cost of malaria in 1918 (for three items given above)........	1,811.25	5,640.75	414.00	181.00	156.50	26.00	8,229.50
Per family......	19.29	75.10	21.80	15.08	3.41	1.86	31.70
Per person......	4.79	17.80	4.23	3.35	0.89	0.45	7.66
Per person sick	7.64	27.20	6.90	5.66	6.27	2.17	14.05

* Labor loss is given for the wage-earning members of a family; casual labor is not included. The wage base is $4 a day.

An examination of the table discloses these salient facts:

1. Approximately half (54.5 per cent.) of the population of the district had malaria in 1918. The variation ranged from two out of every three persons (67 per cent.) in Anderson town and Anderson section, to one in every seven persons (14 per cent.) in Cottonwood town. The least malaria appeared where there was the least irrigation.

2. Labor loss, on the average, is the most important direct economic loss caused by malaria, with the cost of medical service second, and medicine third.

3. The cost of malaria due to the three items of medicine, medical service and labor loss averaged $31.70 per family, $14.05 per person sick, and $7.66 per person. In the most intensely malarial section of the district it averaged $75.10 per family, $27.20 per person sick, and $17.80 per person.

4. The total cost (three items) for the district in 1918 (assuming that $8,229.50 covered 80 per cent. of

the population of the district) was $10,400. Assuming that approximately the same incidence of malaria occurs in the southern part of the district in 1919, under full irrigation, as occurred in the northern part in 1918, the approximate loss for the entire district in 1919 will not be less than $13,500 for 325 families, or about $41.50 per family.

OTHER COSTS OF MALARIA

Other costs of malaria, for which no accurate data were readily obtainable, are:

1. Deaths from malaria. The six deaths in this district in 1918 probably averaged not less than $100 per funeral, in addition to the economic value of the lives lost.
2. The item of labor loss among casual laborers. This is known to be large, but could not be determined at the time of investigation.
3. Losses caused by inability to handle crops at the proper time, on account of malaria attacks. One known instance of this kind resulted in a definite loss of $120.
4. Losses on forced sales of property, by people leaving the district on account of malaria. Nine families made statements of intention to leave the district because of the malaria. In addition, the presence of malaria deters many families from buying land and developing it: three such cases came to my attention, and there were rumors of many more.
5. Losses due to vacant property, particularly in Anderson town, much of it due to the presence of malaria. At least twenty such vacant properties were observed, which have an annual rental probably not less, on the average, than $200.
6. Removal by many families from the district in the summer for the express purpose of avoiding the malaria if possible. Eight such cases came to my attention, and there are probably more. Such moves can hardly average a lower cost than $50 to the family: the economic loss to the community is probably much greater.
7. The loss due to depreciation of property values caused by the presence of malaria and mosquitoes. This cannot be definitely determined, but is probably greater than all other items combined. A conservative estimate would be between $5 and $10 per acre, or, say roughly, $250,000 for the entire district.

COST OF CONTROL MEASURES

The cost of drainage and mosquito control work in the district I have roughly estimated at $22,400 in the first year, $5,000 in the second year, and $3,800 in the third and subsequent years. Of the first year's expense, $12,000 is allowed for agricultural drainage and correction of interferences with natural drainage, which would be required regardless of the presence of malaria.

Estimating a 50 per cent. reduction of malaria in the first year, 75 per cent. in the second, 90 per cent. in the third, and 95 per cent. in the fourth year (our experience in California has shown that this is readily possible), four years' work should eliminate, in savings, the cost of malaria due to the three items of medicine, medical service, and labor loss, and should show a considerable profit in other items, particularly in appreciation of property values.

The organization of a mosquito abatement district, under the provisions of the state enabling act, has been advised as the first step in control measures.

THE SO-CALLED DOUBTFUL OR PARTIAL WASSERMANN REACTIONS

A PLEA FOR QUANTITATIVE RESULTS, AND DESCRIPTION OF THE WRITER'S METHOD

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In the early days of the Wassermann work it was found that, while the majority of serums obtained from bona fide cases of syphilis gave complete complement fixation, when tested in the usual manner, only partial fixation was noted in a certain proportion, and notably in those that had been undergoing active treatment. The occurrence of such partial reactions, which were generally designated by the symbols ++, +, ± and even ∓, was interpreted as indicating the presence of relatively small quantities of the syphilitic antibody, and hence as a favorable symptom in those undergoing treatment, but nevertheless as indicating the existence of syphilis. Further studies then showed that such partial reactions do occur, as a matter of fact, in actual cases of the disease, but that every partial reaction does not necessarily denote syphilis. Generally speaking, the conclusion was reached that complement fixation, whether complete or incomplete, can only be regarded as indicating the existence of the disease in question provided the biologic reagents employed in the test are of standard quality and stand in a definite quantitative relation to each other; that the investigator does not use antigens in too concentrated a form, or complement in too small an amount (or what amounts to the same thing in an insufficiently active state), or the hemolytic amboceptor in insufficient or too large a quantity; etc.; for lack of watchfulness in any of these respects may give rise to partial reactions or, indeed, to complete reactions, though the patient is nonsyphilitic, or to negative results in individuals suffering from a bona fide attack of the disease.

Many investigators, realizing these possible sources of error, have attempted to eliminate them by various modifications of Wassermann's original technic, and it may be confidently asserted that many false diagnoses of syphilis could be avoided if the laboratory workers saw fit to adopt some of the suggestions that have been made. But unfortunately they have not done so, and as a consequence the clinician only too frequently finds himself in disagreement with the laboratory worker, and particularly so on the basis of the so-called doubtful reactions. Many laboratory workers still report such results by the symbol ++, etc., thereby suggesting to the physician not so much the doubt that he himself may feel, but the actual existence of the disease. As the general practitioner is not commonly versed in the intricacies of the Wassermann technic, the plus sign to him usually means that the patient has syphilis, and is hence a signal for active treatment, irrespective of the number of plus marks that may be reported, and many a poor victim no doubt has thereby been condemned to years of unnecessary treatment.

Just why so many workers still insist on exposing themselves to the pitfalls of the original or the early Wassermann technic it is difficult to say, as some of the sources of error, at any rate, are fairly well understood and might readily be avoided. In some instances an ultraconservatism is no doubt responsible for this reluctance to advance with the times—an ultraconservatism based on a general disinclination to deviate from the well-trodden path of the past. In other cases I have reason to assume that there is a tendency to leave well enough alone, on the ground that the original technic is time-consuming enough, as it is, and that any tendency to further lengthen the process would better be disregarded. Whatever the excuses may be, so much is certain, that no excuse is admissible when definite sources of error are disregarded at the expense of the patient.

In the present paper it is my purpose to discuss in some detail two factors that probably more commonly than any others are responsible for partial reactions and for negative reactions when syphilis actually exists.

THE COMPLICATING RÔLE OF ANTISHEEP AMBOCEPTORS IN HUMAN SERUMS

Various writers have called attention to the fact that human serums may contain antisheep amboceptors in variable but frequently sufficient amount to transform an otherwise positive into a partial or even a negative reaction. Noguchi has shown that one antibody unit is made negative by six amboceptor units, and three antibody units by ten amboceptor units when the Wassermann system, that is, the guinea-pig complement antisheep system, is used. Theoretically this is interesting enough in itself, as the observation raises the question whether the supposed union between complement, syphilitic antibody and antigen can be severed by an excess of amboceptor, if indeed this conception of the nature of the so-called complement fixation expresses what actually takes place. However this may be, the fact remains that syphilitic serums which do contain a sufficient quantity of antisheep amboceptor will show only a partial or, indeed, a negative reaction when examined according to Wassermann's original method.

As regards the frequency with which such amboceptors occur in human serums, the impression seems to be quite common among some Wassermann workers that they are, after all, rare and may properly be neglected in routine work. Why this should be the general view, it is difficult to understand, for it is a simple matter to convince oneself that the presence of these antisheep amboceptors, as they are usually called, is not only not rare but, on the contrary, exceedingly common. I would suggest that those workers who believe that their presence may be disregarded treat their specimens after the first incubation with the usual quantity of corpuscle emulsion and reincubate for five to ten minutes and then examine their tubes before adding the amboceptor. They will no doubt be surprised to find a number of negative and partial final reactions, even if all the serums were obtained from syphilitic patients, and they will be convinced thereafter that their work under such conditions can have no claim to accuracy or dependability.

I have not made any special note of the number of times that I have encountered normal antisheep amboceptors in human serums in sufficient quantity to make a truly positive serum give either a partial or a negative reaction, but I have seen it so often as to have convinced myself quite early in my Wassermann work that this source of error must be eliminated. Noguchi reports that of 326 serums that he examined only twenty-three contained no antisheep amboceptors at all; that in 192 the quantity amounted to two units or more and in ninety-eight to four units or more—figures that speak for themselves.

Of the desirability of avoiding this source of error there can be no question. The problem is merely whether this can be done. Two methods have been proposed to this end.

Noguchi suggested the substitution of an antihuman system for Wassermann's antisheep system, and in certain laboratories this method of procedure is followed, and no doubt obviates, in most cases, errors arising from this source. I have myself advocated the removal of the natural amboceptors by extracting with sheep corpuscles, and those workers who have been sufficiently interested in this method to run parallel examinations, with and without extraction, are no doubt fully convinced of the necessity of the step and of the facility with which this can be done.[1]

Either method will prevent the obscuring of a positive reaction by the substitution of a negative or a partial reaction, provided a sufficient quantity of the syphilitic antibody is present. Neither method, however, in itself, takes this latter factor into consideration, whereas this factor is at least as important as the presence of natural amboceptors. We shall consider this in detail in the following section.

VARIATIONS IN THE QUANTITY OF THE SYPHILITIC ANTIBODY IN THEIR RELATION TO PARTIAL REACTIONS

Recent investigations have shown me that in the presence of large quantities of the syphilitic antibody—in the standard dilution of 1 : 5—complement fixation takes place instantaneously, without any incubation whatsoever, especially if the total bulk of the diluted serum, antigen and complement is small, so that immediate contact of the various ingredients with each other is assured. If, for example, the standard volume for each component, in appropriate dilution, is 0.2 c.c., the hemolytic amboceptor and corpuscles may be added immediately following a simple shaking of the tube containing the patient's serum, the antigen and the complement, and it will be noted that on incubating an absolutely sharply cut triple or quadruple plus reaction, without any trace of hemolysis, may be frequently obtained. Evidently the velocity of the reaction under such conditions is enormous.

If now such a serum is further diluted, it will be observed that an instantaneous reaction can no longer be obtained, but that under the conditions of the experiment just described hemolysis of variable degree, i. e., a partial reaction, will occur. On incubation for a variable length of time before the addition of amboceptor and corpuscles, it will be noted, however, that complete fixation of the standard quantity of complement may be obtained, nevertheless. The length of time that is required to secure complete fixation depends on the degree of dilution; in other words, on the quantity of the reacting substance. The smaller this is, the more prolonged will the incubation period have to be. This may be expressed by stating that the velocity of the reaction is proportionate to the quantity of the reacting substance, or that the period of time necessary for complete fixation varies in inverse proportion to the quantity of the reacting substance.

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[1] The majority of workers who do not use Noguchi's antihuman system fail to do so because of the difficulty of obtaining a high titer antihuman amboceptor.

A couple of examples will illustrate this:

1. A serum obtained from an active syphilitic in the second stage gave an instantaneous reaction in the usual dilution of 1:5. Dilutions were then prepared in the proportion of 1:10, 1:20, 1:30, and sets of 0.2 c.c. each were now combined with an equal quantity of antigen and complement, and incubated for varying lengths of time, amboceptor and corpuscles being finally added to test the extent of the complement fixation. The results are shown in Table 1.

TABLE 1.—REACTIONS OF VARIOUS DILUTIONS OF SERUM AFTER VARIOUS TIME PERIODS FROM AN ACTIVE SYPHILITIC IN THE SECOND STAGE

	Immediate Reaction	Reaction after Incubation for				
		10 Min.	20 Min.	30 Min.	40 Min.	50 Min.
Dilution 1:5........	+++	+++	+++	+++	+++	+++
Dilution 1:10.......	+++	+++	+++	+++	+++	+++
Dilution 1:20.......	0	0	0	++	++	+++
Dilution 1:30.......	0	0	0	0	0	0

2. In Table 2 will be found the reactions of serum obtained from a quiescent syphilitic in the third stage.

Such findings unquestionably warrant the conclusion that unless a patient's serum contains a certain quantity of the so-called syphilitic antibody complete complement fixation will not be obtainable within the usual incubation period of thirty minutes, which seems to have become the standard in the various laboratories the country over, but that a partial reaction will result if the amount is sufficient to that end, or a negative reaction if the quantity be particularly small. It would further follow that the meaning of such doubtful reactions could be determined by repeating the test with a longer period of incubation, and that in certain cases the presence of syphilitic antibody could still be definitely established by such means, whereas routine examinations along the old lines would lead to a negative result.

TABLE 2.—REACTIONS OF VARIOUS DILUTIONS OF SERUM OBTAINED FROM A QUIESCENT SYPHILITIC IN THE THIRD STAGE

	Immediate Reaction	Reaction after Incubation for				
		10 Min.	20 Min.	30 Min.	40 Min.	50 Min.
Dilution 1:5........	+	+++	+++	+++	+++	+++
Dilution 1:10.......	0	++	+++	+++	+++	+++
Dilution 1:20.......	0	0	+	+	++	+++
Dilution 1:30.......	0	0	0	0	0	0

TABLE 3.—RESULTS OF LONG INCUBATION IN SERUMS CONTAINING ONLY A SLIGHT QUANTITY OF THE SYPHILITIC BODY

Case	Stage of Disease	Reaction after Incubation	
		For 30 Min.	For 60 Min.
B.	Tertiary stage	Partial	Complete
McC.	Tertiary stage	Negative	Complete
W. W.	Tertiary stage	Partial	Complete
H.	Primary (3d day)	Partial	Complete
1616.	Secondary	Partial	Complete
P. M.	Early tabes	Partial	Complete
I. S.	Tertiary	Partial	Complete

A few examples illustrating this point have been collected and are shown in Table 3, the first column indicating the result at the end of thirty minutes' incubation, the second after an hour's incubation.

SUGGESTION FOR A NEW SYSTEM OF DENOTING RESULTS

As the period of incubation that is necessary to effect complete complement fixation is thus unquestionably an index of the quantity of the reacting substance, it has occurred to me that on this basis a numerical scale for denoting partial reactions could be established that would prove more satisfactory and would yield more information than our old system of marking by plus signs, from which all of us would no doubt be only too glad to be released. In many laboratories the confusing ++, +, ± and ∓ signs are no longer used, and I sincerely believe it would be a wise step to eliminate these, and the three and four plus signs as well, and to substitute definite figures.

TABLE 4.—PROPOSED SYSTEM OF DENOTING REACTIONS

1 unit	requiring	60 Min.	for fixation,	would represent	1.0 per cent.
10 units	requiring	50 Min.	for fixation,	would represent	16.6 per cent.
15 units	requiring	45 Min.	for fixation,	would represent	25.0 per cent.
20 units	requiring	40 Min.	for fixation,	would represent	33.3 per cent.
30 units	requiring	30 Min.	for fixation,'	would represent	50.0 per cent.
40 units	requiring	20 Min.	for fixation,	would represent	66.6 per cent.
45 units	requiring	15 Min.	for fixation,	would represent	75.0 per cent.
50 units	requiring	10 Min.	for fixation,	would represent	83.3 per cent.
60 units	requiring	0 Min.	for fixation,	would represent	100 or more

I should therefore propose to designate as a unit such quantity of the syphilitic antibody as requires sixty minutes' incubation at from 37 to 40 C. to bring about complete fixation of a standard amount of complement. Such amount of the syphilitic antibody as is capable of fixing the same quantity of complement without any incubation whatsoever I should designate as sixty units and a reaction of the latter type I should term a 100 per cent. reaction. I have chosen the above quantity as the standard unit for the reason that when one progressively dilutes a serum that in the usual dilution of 1:5 will give an instantaneous reaction complete fixation in the highest dilution will require an incubation of sixty minutes.

According to this plan, then, the various percentages would correspond to definite units of the reacting substance on the basis of the number of minutes necessary to secure complete fixation of a standard amount of complement in the presence of a standard quantity of antigen, as illustrated in Table 4.

TABLE 5.—LENGTH OF TIME NECESSARY TO SECURE A +++ REACTION, TOGETHER WITH THE CORRESPONDING VARYING QUANTITIES OF ANTIBODY

Case	Time Necessary to Bring About Complete Fixation, i. e. a +++ Reaction	Corresponding Content of Antibody
J. S.	45 minutes	25.0 per cent.
P. M.	30 minutes	50.0 per cent.
1616.	60 minutes	1.0 per cent.
Mrs. D.	10 minutes	83.0 per cent.
Mrs. W.	30 minutes	50.0 per cent.
L.	5 minutes	91.6 per cent.
Y.	1 minute	100.0 per cent.

Such a system of denotation would, in my opinion, be more logical than our plus signs. Every percentage figure would indicate that syphilitic antibody is actually present and would give an idea of the relative amount. With our present system, all of our +++ cases by no means contain the same quantity of reacting substance, as is clear from the varying length of time that is necessary to secure a +++ reaction.

This is well shown in Table 5, all the cases of which gave complete fixation, the time necessary to bring this about, varying, however, as indicated.

While the method suggested will, it is thought, be helpful in the study of +++ cases as designated by the old system, it is proposed chiefly for the purpose of eliminating doubtful or partial reactions, which in the past have been so troublesome and confusing both to the laboratory worker and to the physician.

PROBABLE MECHANISM UNDERLYING THE PRODUCTION OF PARTIAL REACTIONS

Let us consider the probable mechanism underlying the production of partial reactions due to the presence of small quantities of syphilitic antibody. In the past our conception of the nature of the Wassermann reaction has been that the syphilitic antibody and antigen combine and that complement is taken up by the resultant product. The dependence of the degree of complement fixation on the element of time, noted in the present paper, suggests that this idea must be somewhat modified. Evidently the reaction follows the law of mass action, the antibody itself apparently playing the rôle of a catalytic agent, which we may conceive as entering into some sort of a combination with either the complement or the antigen, but from which it is at once released when its temporary mission has been accomplished. If this is true, we can readily understand that in the presence of a large number of antibody units, each unit entering into action at the same time, complement fixation would occur with such rapidity that incubation is not necessary at all, the reaction being completed before the hemolytic amboceptor and corpuscles can be added, no matter with what haste this may be done. Similarly, of course, a variable length of time would be necessary to bring about the same result if the quantity of the reacting substance is less, and it will readily be understood that when this falls to a certain level only a fraction of the complement will have been fixed by the time the old standard incubation period of thirty minutes has been reached, and the remainder coming in contact with the hemolytic amboceptor and corpuscles at this time will now bring about partial hemolysis and hence lead to an inconclusive result. A prolongation of the incubation period, on the other hand, would lead to an increasing degree of fixation and under suitable conditions to a complete reaction, provided, of course, the factor that is responsible for the incomplete reaction under the old conditions of the experiment is in reality the one that we have just been considering. If this factor is not operative, and if the presence of natural hemolysins has been excluded, it may be confidently asserted that partial reactions cannot be referred to the existence of a syphilitic infection, and in such case it will be noted that the degree of fixation does not increase with the lengthening of the period of incubaion.

PROPOSED TECHNIC

In discussing my work with some of my colleagues it was suggested that, since the Wassermann technic, even with the present system, is so time-consuming, every effort should be made to simplify it and not to lengthen the process by the introduction of any additional steps. I fully realize such a desideratum and would favor any change that would cut down the necessary time, provided this could be done without detracting from the accuracy of the test. But accuracy must, after all, be our prime consideration. However, I believe that I have succeeded in reducing the time required for routine examinations to such an extent by certain changes in technic that, even with the additional manipulations proposed for the purpose of obtaining quantitative results, and of eliminating doubtful reactions, the method as given in greater detail below will prove more expeditious than the technic now in vogue.

Before going on to a description of the method that I should advocate for general adoption I would like to discuss in detail a few technical questions that have not received the attention of laboratory workers that they deserve.

TIME REQUIRED FOR THE EXTRACTION OF NATURAL AMBOCEPTORS

The majority of workers who prefer to extract the natural amboceptors by means of sheep corpuscles do so by diluting a given volume of the serum with four or five volumes of the standard corpuscle emulsion, and incubating for thirty minutes at from 37 to 40 C., after which the corpuscles are thrown down by centrifugation and the supernatant fluid is further treated in the usual manner.

The question arises as to how many units of natural antisheep amboceptor may be present in a human serum and how large a quantity of sheep cells are necessary to remove such an amount in a given length of time. That thirty minutes are more than sufficient I have shown long ago. Recent studies, however, have convinced me that a ten minute incubation period will suffice to extract from 0.4 c.c. of serum at least eighty units of amboceptor that has been artificially added, and that fifty units may indeed be removed in five minutes by four volumes of a 2.5 per cent. emulsion of sheep corpuscles (having reference to a 2.5 per cent. emulsion prepared from corpuscle mush). As Noguchi has shown that the content of human serums in antisheep amboceptors rarely exceeds ten units in 0.2 c.c. of serum, it is clear that a longer incubation than ten minutes is unnecessary and that a ten minute period may well serve as standard for extracting 0.4 c.c. of serum with 1.6 c.c. of standard sheep corpuscle emulsion.

TIME REQUIRED FOR THE INACTIVATION OF SERUMS

In the past it has been customary to inactivate serums by exposure to a temperature of 56 C. in a water-bath for a period of thirty minutes. For larger volumes this may be necessary, but for such quantities as we commonly use in Wassermann work a shorter period will bring about the desired result, and for 0.4 c.c. portions inactivation for ten minutes is all that is necessary, as is seen from the following protocol:

TABLE 6.—EFFECT OF EXPOSURE TO 56 C. FOR VARYING LENGTHS OF TIME ON COMPLEMENT CONTENT OF SERUM

Length of Exposure	Evidence of Hemolysis
5 minutes	Faint trace
10 minutes	None
15 minutes	None
20 minutes	None
25 minutes	None
30 minutes	None

Four tenths c.c. portions of human serum were exposed to a temperature of 56 C. in the water-bath, for varying periods of time, as indicated in Table 6, and then diluted with four volumes of saline. Of the resultant dilutions 0.5 c.c. portions were treated with two and a half titer doses of antisheep amboceptor and a corresponding volume of corpuscle emulsion. The tubes were then incubated for fifteen minutes at from 37 to 40 C., centrifugalized and the supernatant fluid examined for evidence of hemolysis.

AMOUNT OF COMPLEMENT TO BE USED AND TIME TO BE ALLOWED FOR FIXATION

With the original Wassermann technic it was customary to allow sixty minutes for the fixation of the complement, in the ordinary warm air incubator. Subsequently, when the water-bath incubator came into use, owing to the possibility of maintaining a more constant temperature and of bringing the contents of the tubes more quickly to the desired warmth, the time was cut down to thirty minutes. As I have shown above, however, the period of incubation necessary to secure complete complement fixation varies with the quantity of the syphilitic antibody, the amount of complement and antigen remaining the same. The larger the amount of complement, the amount of the antigen and the antibody remaining the same, the longer will have to be the period of incubation. This is shown in Table 7.

TABLE 7.—LENGTH OF TIME NECESSARY TO FIX VARYING AMOUNTS OF COMPLEMENT, THE QUANTITY OF ANTIBODY AND ANTIGEN REMAINING CONSTANT

Degree of Complement Fixation in	Number of Complement Units									
	1	2	3	4	5	6	7	8	9	10
60 minutes	+++	+++	+++	+++	∓	0	0	0	0	0
90 minutes	+++	+++	+++	+++	+++	+++	∓	0	0	0

From these observations the conclusion would suggest itself that satisfactory end-results could be obtained most rapidly if small quantities of complement were used and relatively large amounts of the patient's serum. In my own work, however, I have adhered to 0.2 c.c. of a 1:10 dilution of complement in combination with 0.2 c.c. of a 1:5 dilution of the patient's serum, and a standard incubation time of ten minutes, unless special reasons existed for suspecting the presence of especially small quantities of syphilitic antibody. The antigen, of course, was used in like amount. With these volumes complete complement fixation will be obtained not only in ten minutes in the vast majority of syphilitic serums, but even without any incubation in most of the untreated cases.

METHOD OF THE WRITER

The patients' serums are collected in the usual manner and separated from the corpuscles by centrifugation. Four tenths c.c. are inactivated for ten minutes at 56 C., intimately mixed with 1.6 c.c. of a 2.5 per cent. corpuscle emulsion (the percentage figure has reference to corpuscle mush and corresponds to 5 per cent. when the mush is first diluted to the original volume of the defibrinated blood that was placed in the centrifuge tubes) and extracted for ten minutes by incubating at from 37 to 40 C. in the water-bath. The corpuscles are then thrown down and the tubes are charged with 0.2 c.c. portions of the clear supernatant fluid, to which 0.2 c.c. portions of the antigen dilutions, the complement dilution, and in the case of the control tube, of saline instead of antigen are added. After they are shaken, the mixtures are incubated at from 37 to 40 C., in the water-bath and then tested for the presence of free complement by the addition of 0.2 c.c. of amboceptor (two and a half titer doses) and 0.2 c.c. of corpuscle emulsion (of the same strength as the one employed for purposes of extraction), the tubes being returned to the water-bath and left for ten minutes, or at least until the control tubes are completely hemolyzed. The negative cases can then be read off at once and reported as such.

Those tubes in which complete hemolysis has not occurred are centrifugalized and the color of the supernatant fluid is noted. If this is colorless the examination may be reported as positive without further comment, or another set of tubes may be charged with the same reagents and in the same sequence, and thoroughly shaken after the addition of each, but not incubated at all before the addition of the amboceptor and the corpuscles. If the specimen is then incubated until the control tube is hemolyzed, and complete complement fixation has occurred, as manifested by lack of any hemolysis on final centrifugation, we are dealing with a 100 per cent. reaction. If partial hemolysis has occurred another set of tubes may be prepared and incubated for five minutes after adding the complement, and before testing for its fixation. If complete fixation now occurs we note the result as 91.6 per cent., while partial hemolysis in this set also, but complete fixation in the ten minute specimen, would place this in the 83 per cent. group.

Those specimens that gave a partial reaction on first examination, after ten minutes' incubation, are now further examined, to which end I usually put up a double set, of which the one is incubated for thirty minutes and the second for sixty minutes before adding the amboceptor and the corpuscles. If this is done, and all reagents have been functioning properly, it will be noted that every doubtful reaction will now resolve itself either into a straight negative or a straight positive reaction, the cause of the partial reaction at the end of the primary incubation for ten minutes being due, in syphilitic cases, to the presence of smaller quantities of the reacting substance which, as has been previously shown in this paper, require a longer period of time to perform the work prescribed.

As we have taken as a unit that quantity of syphilitic antibody contained in 0.04 c.c. of concentrated serum, which is equal to 0.2 c.c. of the diluted and extracted original 0.4 c.c. with which we started and which requires sixty minutes' incubation in the water-bath to completely fix 0.2 c.c. of our complement dilution in the presence of 0.2 c.c. of our standard antigen dilution, we denote such a reaction as a 1 per cent. reaction, whereas one occurring instantaneously; that is, without incubation, indicates a 100 per cent. reaction. The intervening values may be graded accordingly as already explained.

Partial reactions due to accidental factors, errors of technic, improper reagents, etc., never resolve themselves in the manner just described. They either disappear, or remain constant irrespective of the time of incubation; there is never a consistent increase in the degree of complement fixation as the period of incubation is lengthened, such as small amounts of syphilitic antibody will evoke.

Using the technic as outlined above, any worker who is sufficiently interested will, I am sure, not be disappointed in the results. To cite large series of cases illustrating its accuracy seems without purpose, particularly in view of the fact that many of the procedures with which the findings might be controlled are so thoroughly faulty that they would not constitite a proper control. I can warmly recommend the method, if for no other reason than the fact that it disposes of the troublesome problem of the doubtful or partial reactions.

had wasted precious years. He had brains and he worked. He simply was not given what he longed to have.

Many of these men, both young and mature, I have come to know with an intimacy that only army camp life can afford; they have been my loyal assistants, and I feel a deep personal affection for them; and I know what I say when I assert that those who were not competent were not so by choice. They retained potential growth, and they grew when they were taught and helped. Sixty-six per cent. of the graduates last year took their degree in what we call Grade A schools. Evidently the time is ripe for a regrading.

My personal experience in base hospitals can be briefly summarized. Physicians, irrespective of age, who had served at some time as interns in good hospitals were usually efficient, safe, and trustworthy. These men, as a rule, were graduates of good medical schools, but this was not invariably the case. There were notable exceptional cases in which men had graduated from mediocre schools and had appointments as interns in good hospitals. In the second place, men who had not had some hospital experience, or who had been interns in poor hospitals, were usually inefficient, ignorant of common methods of diagnosis, and were not to be trusted with the seriously sick. Some of these men came from good schools and their scientific point of view was, perhaps, correct; the majority, from weaker schools, had no point of view at all. In the practical workings of a large hospital staff intrusted with the care of from 500 to 1,000 patients, there was no exaggerated refinement in determining a physician's qualifications to care for the sick.

What I have detailed as my personal experience would, I believe, be concurred in generally by chiefs of military hospitals. I have discussed the subject in all its details with a good many of them. Many of us have been teachers of clinical medicine all our lives and were vitally interested. Nearly a year ago I wrote down my impressions of the general practitioner who had not had good hospital training, as I have seen him in camp and hospital; and I submitted this impression to three other chiefs who were, like myself, teachers. Not one said it was an exaggeration. These impressions were as follows:

1. The practitioner of this class cannot differentiate a systolic from a diastolic murmur; in consequence, he is wholly incompetent to express an opinion about a cardiac disorder.

2. He cannot differentiate pleural effusion from pneumonia. He has never done a thoracentesis, so he cannot correct his own tendency to error.

3. He cannot recognize meningitis and has never done (often never seen done) a lumbar puncture, hence he cannot treat the disease.

Occasionally he has never seen diphtheria, though he has seen "membranous croup" which terminated fatally. A few had never seen diphtheria antitoxin administered.

The diseases I took for my basis are the common diseases. Pneumonia for years has been the "master of the men of death." We are all alike helpless enough, but what is the value of the physician if he cannot recognize complications which have a remedy when recognized? Of what help is a meningitis serum, if the disease is not diagnosed? The keystone of medicine is diagnosis; without it the structure collapses.

RECOGNITION OF DEFECTS IN MEDICAL EDUCATION NECESSARY

A frank and honest recognition of the defects in present medical education is necessary for any progress toward betterment. This discussion will result in no good unless it leads to reorganization of medical schools and in teaching hospitals. In the last decade, the emphasis has been placed on the laboratory aspect of medicine. Probably that was correct, because a scientific point of view was at that time generally lacking. But we must not make the mistake of believing that the scientific care of the sick can be taught in the laboratory. It can be taught only in one place, a hospital ward. It can be taught only in one way, by a competent clinician at the bedside to a small group of students. Medical schools that do not command large hospital facilities with adequate funds to utilize all scientific methods in the diagnosis and treatment of disease, and adequate funds for a large teaching staff, cannot teach clinical medicine.

There are quite a number of medical schools classed as Grade A which have not these opportunities to offer to their students, and on that account they are heavily handicapped in training students for the practice of medicine in any of its branches. The science of medicine can be taught in the laboratory and didactically; the art of medicine cannot be so taught. What I mean is this: A good pathologist ignorant of the art of medicine can make a diagnosis if one bring him certain facts relative to the physical signs in the case. But the same pathologist could probably not elicit those signs at the bedside. It is the ability to examine a patient and to gather the important data which constitutes the art of diagnosis. This art cannot be taught didactically; it may be taught successfully only at the bedside. All of my observations have gone to confirm me in the belief that the general practitioner is inefficient because he does not know how to examine patients. At the School of Military Medicine, Fort Oglethorpe, two weeks of the brief course was expended in teaching this fundamental art. Brief and superficial as the course had to be, many a physician who had graduated within the last decade from a school reputed to be good asserted that this superficial course gave him more than his school had given.

Clinical instruction has improved markedly in the last decade in recognizing the requirements for teaching diagnosis, but there is not yet anything like a general adoption on the part of medical schools of bedside teaching or the clinical clerk system. Except in a relatively small number of very high grade schools, these modes of instruction are farcical. There seems little doubt in the mind of any one as to the desirability of this method; the difficulty has been to secure hospital facilities for medical schools and to afford financial outlay for the salaries of the corps of instructors. The program for the future in medical schools must take into account these features, in the same way that in the past attention has been paid to the laboratories of the fundamental sciences. At best, medical schools can teach only principles and methods. The bright graduate of the best of schools is wholly unfitted to practice medicine. He knows principles and he knows methods; he knows types of diseases, perhaps. He does not know variations in types and he is lacking in the experience which renders him safe. From the point of view of public welfare, the required hospital year cannot come too soon. However, the mistake must not be made in this country which has been made in some countries, that a year in any hospital is acceptable. This formative period spent under the direction of a poor clinician has only bad habits and erroneous ideas for its result. Some way must be found whereby medical schools or the state can designate the hospitals in which men may serve their internship.

NECESSITY FOR IMPROVED CLINICAL INSTRUCTION

Reluctantly I have been forced to the conclusion that training in a first class hospital is equally as important, if not more important, than undergraduate instruction in fitting physicians to care for the sick. So many examples have come to my notice of men who had graduated from schools known to be mediocre or worse, but who had a hospital service under an excellent attending physician who had left the mark of his teaching and influence on his assistants. But better far no internship at all than the blighting and pernicious atmosphere that young men come into in many poor hospitals. The welfare of the public is our concern—the reason for our profession. We would better lead where soon we needs must follow. Signs are not wanting that more is demanded than is now given. A test of fitness to practice could be met only by men trained in good hospitals, for the test will be the ability to recognize, to diagnose, disease—a practical test.

My ideas of the defects in medical education, as revealed by the product of the medical schools, would indicate that progress for the future in teaching the clinical subjects must be along lines of practical, intimate instruction in the art and science of diagnosis. We must teach students how to examine patients with that same minuteness and thoroughness of analytical method that is used in the bacteriological laboratory in the differentiation of bacterial types. The laboratory of clinical medicine is the ward. Nothing can take its place. Didactic teaching, the lecture, and the clinic should be relegated to an entirely subordinate position. They have a use, but a subordinate use.

A thorough revision of the list of Grade A schools should be made from the point of view of their ability to meet the demands of practical instruction, in the clinical years. Schools that cannot hope to have in the future the funds and the hospital facilities necessary for teaching medicine in the final years should offer only the fundamental sciences.

This point of view may seem novel in coming from one who has spent much of his time in laboratories, in research, and who has done what he could to promote the spirit of investigation among students. I am not losing sight of the need of that group of students, but numerically that group will always be small. The promising investigator is the exception, and he can be handled in the exceptional way. The average student in medicine, as the average student in law or theology or chemistry, has no mind for abstractions; he has scant ambition to be a scientist. His tastes and his inclinations are quite otherwise, and we must not forget that modest intellectual ambition does not unfit him for great usefulness, if he is given proper training.

Is Your Community Fit?—Have you any definite information as to the prevalence of preventable diseases in your city? Without such information health officials cannot direct their activities in a way that will yield the largest returns in disease prevention. All doctors must report such diseases as part of their responsibility to the community.—*Pub. Health Rep.*, April 25, 1919.

THE PRODUCTION OF INDOL BY CERTAIN STRAINS OF THE PFEIFFER BACILLUS *

EDWIN O. JORDAN

CHICAGO

So few positive cultural characters have been recorded for the Pfeiffer bacillus that each additional biologic quality is of some interest. I have not found any statement that a previous test for indol production has been made. Zipfel,[1] who seems to have carried out the most comprehensive series of observations by modern methods on the production of indol by bacteria, lists only four groups as indol-formers (*B. coli* group, *B. dysenteriae* Vars. Flexner and Y, the cholera vibrios and the cholera-like vibrios excepting V. Finkler-Prior and V. Deneke) and sixteen groups as not forming indol. Pfeiffer's bacillus was apparently not among those tested.

The majority of strains of the Pfeiffer bacillus that I have been able to obtain form indol promptly. The paradimethylamidobenzaldehyde method is used. A satisfactory medium is standard meat infusion broth to which 5 per cent. of sheep blood is added while the broth is hot (above 90 C.) and which is then filtered through cotton or filter paper.

In all, thirteen strains of the Pfeiffer bacillus have been tested. These include two strains from fatal cases of influenza—one from heart blood, the other from lung tissue. Seven strains are from normal throats and one from influenza sputum; the source of the others is not known. All show the hitherto recognized cultural and morphologic characters of the Pfeiffer bacillus. Ten of the thirteen strains produce indol abundantly in twenty-four hours. Two of the three strains giving negative results are from normal throats; the source of the other is not known. Five strains are from Chicago, four from Rochester, Minn., two from Washington, D. C., and two from New York City. The three strains not producing indol are from Chicago, Washington and Rochester, respectively.

It seems possible that this character may be usable for a rough preliminary differentiation of the indol-producing Pfeiffer bacilli or for a "presumptive test" of their presence. The other bacteria commonly found in the throat do not appear to be indol-formers. Zipfel and others have reported finding no evidence of indol production by the various cocci and I have tested thirty-six different strains of green-producing and hemolytic streptococci, pneumococci, meningococci and staphylococci from the mouth, with uniformly negative results. Diphtheria bacilli were reported by some of the earlier workers as forming indol, but later investigators have generally not confirmed this. Zipfel tested twenty-seven strains with a negative outcome. I have obtained no indol products with any one of five strains.

Simultaneous inoculations of blood broth with pure cultures of the Pfeiffer bacillus and of the ordinary mouth cocci have shown that the Pfeiffer bacillus is able to grow in competition with the other organisms, and that the mixture, like the pure culture, yields a good indol reaction in twenty-four hours.

It was thought that throat swabs washed directly into the broth might give an indication of the presence of indol-producing Pfeiffer bacilli. Fifty-eight different normal persons have been examined with this in view. A positive indol reaction has been obtained in forty-eight, a negative in ten, making the proportion of positive indol findings from throat swabs about 83 per cent. Seven of the persons giving positive indol reactions from throat swabs had a history of influenza in the fall of 1918; also three of those giving negative reactions.

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* Influenza Investigations, U. S. Public Health Service.

[1] Zipfel: Centralbl. f. Bakteriol. I, Orig., 67: 572, 1913.

Seven of those giving negative indol reactions were retested (from a few days to a few weeks later) and four of these yielded indol on the second testing. In three of these both tonsil and nasopharynx swabs gave indol; in the other only the tonsil swab.

If a peptone phosphate medium is used in which *B. coli* and other indol-producing bacteria give abundant indol, no indol is formed after inoculating with throat swabs although good growth occurs. Parallel tests with swabs taken from the same throat at the same time have shown indol production in the blood broth but never in the peptone phosphate medium. Apparently, therefore, a hemophilic organism is the one responsible for the indol production from throat swabs.

It seems a fair presumption from the available data that indol production in blood broth inoculated with throat swabs is due to the presence of indol-producing strains of the Pfeiffer bacillus, although a final judgment on this point is hardly possible at the present time. Should this presumption prove to be justified, these results indicate the presence of Pfeiffer bacilli of this type in approximately 80 per cent. of normal throats. This is a higher proportion than usually obtained by the ordinary cultural methods. In the cases examined in this series the presence of the Pfeiffer bacillus was indicated in about 40 per cent. by the blood agar plate cultural method, as compared with about 80 per cent. by the indol presumptive test.

Clinical Notes, Suggestions, and New Instruments

A METHOD OF DELIVERING THE PLACENTA

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I desire to present a procedure for the expulsion of the placenta. Physicians in general have accepted the dictum that the third stage of labor should be allowed to develop naturally, and that no attempt should be made to express the placenta until separation has occurred, provided there is no hemorrhage.

The interval between the birth of the child and the moment of expression of the placenta is still being handled in different fashion, according to the teachings of various clinics, ranging from the absolutely let alone policy of Leopold, who insists that the abdomen should be left untouched following the birth of the child, if need be for twenty-four hours, leaving the expression of the placenta absolutely to the natural powers of the woman;. to the other extreme, which consists in grasping the fundus, and as soon as contractions have appeared or have been called forth by massage, to express the placenta. Omitting a critical consideration of the merits of these various procedures at this time, and limiting myself to a discussion of the act of expulsion, I think the consensus of the best obstetrical opinion of today, in this country at least, is that after a suitable period of waiting, which averages half an hour, the uterus having undergone sufficient contractions, the placenta being separated and lying in the lower uterine segment, it is then permissible to grasp the fundus directly over its center, and the uterus being in contraction and in midline, to express the placenta.

In skilled hands, with a proper recognition of the risk of too much traumatism resulting in a metritis, and of rupture of a pus tube by grasping the fundus laterally instead of centrally, this procedure is entirely without danger. However, if there is a way in which the natural powers of the woman, both voluntary and involuntary, can be utilized for the purpose of expression without handling the uterus, I am sure this is preferable. All of us have seen the not infrequent cases in which the woman spontaneously expels the placenta directly after delivery, or just as we are about to express it for her. In a great majority of cases her inability to accomplish expulsion spontaneously is due to the complete loss of tone of the abdominal wall just released from its prolonged condition of overstretching. If the abdominal tone and the intra-abdominal pressure can be restored for the time being, the woman has regained her voluntary powers of expulsion.

For some time I have been accomplishing this in a very simple way. After the usual period of waiting, averaging half an hour, and when the uterus is at the height of a contraction, as evidenced both by feeling it and by the pain the woman is experiencing, I grasp the abdominal wall crosswise above the fundus and pull the rectus muscles together, thus taking up all the slack. I then encourage the woman to bear down, and in practically every case in which expression on the fundus would have succeeded, this procedure has succeeded. If then there should be adherent membranes, they are treated in exactly the same fashion as following any other method of expression. The advantage claimed for this procedure is a total avoidance of handling or pressure on the uterus, and I believe that any device that will help to achieve that end, and give the same result, is worth advocating.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

PROTARGENTUM-SQUIBB.—A compound of gelatin and silver, containing approximately 8 per cent. of silver in organic combination.

Actions and Uses.—See general article Silver Preparations (New and Nonofficial Remedies, 1919, p. 307).

Dosage.—Protargentum-Squibb is used in 0.25 to 5 per cent. aqueous solutions, which should preferably be prepared fresh as required. Solutions are best made by sprinkling the powder on cold water without stirring.

Manufactured by E. R. Squibb & Sons, New York. No U. S. patent or trademark.

Protargentum-Squibb is obtained by the action of silver nitrate on gelatin in the presence of an alkali, precipitation by alcohol and drying in *vacuo*.

Protargentum-Squibb is a chocolate colored, odorless powder, readily though slowly soluble in water, insoluble in alcohol or oils.

An aqueous solution of protargentum-Squibb is alkaline to litmus, but neutral to phenolphthalein. An aqueous solution is not affected by addition of albumin nor by cocaine hydrochloride in weak solution.

When an aqueous solution is treated with sodium chloride, no precipitate is produced although opalescence occurs; no precipitate is formed on the addition of acetic acid.

Dissolve about 1 gm. of protargentum-Squibb, accurately, weighed in about 10 Cc. of distilled water, add 10 Cc. sulphuric acid, U. S., and sufficient powdered potassium permanganate so that the color of permanganate persists for ten minutes (about 2 Gm.). Decolorize the liquid with powdered oxalic acid, add 10 Cc. nitric acid (25 per cent.), heat on a bath of boiling water for fifteen minutes to destroy excess of oxalic acid, cool, dilute with 50 Cc. distilled water, add 5 Cc. saturated solution of ferric ammonium sulphate and then titrate with tenth-normal volumetric potassium sulphocyanate solution. It should show not less than 8 per cent., nor more than 9 per cent. of silver.

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SATURDAY, MAY 24, 1919

SCIENCE AND SURGERY

A recent paper by Horsley[1] on the value of biologic principles in surgical practice concluded with these words:

> Real progress in surgery lies not so much in cultivating the art of surgery and in striving after mechanical dexterity, which is important but can be acquired in a few years, as in the study of biologic principles that concern function, nutrition, metabolism, and repair of tissues, and in the thoughtful application of these principles to every operation and to every method of surgical treatment.

It would be easy to substantiate this significant statement by reference to the history of progress in surgical performance. However, it cannot be reiterated too often, especially to those about to embark on a career in medicine, that technic and curative or operative methods are merely means to an end. Real advance of a permanent sort can rarely be made until there is some appreciation that bodily disorders are in most instances the expression of perverted functions which must be thoroughly understood to be intelligently dealt with, not only in medicine but also in surgery. An accurate knowledge of the location of bodily structures and an ability to alter their position or connections by skilful surgical manipulation may, after all, avail very little unless the mode of physiologic performance of the organs concerned is understood sufficiently well to give promise of satisfactory functioning after the anatomic alterations or reconstructions are carried out. The modern procedures for facilitating wound healing are based not merely on clever manipulations and mechanical devices but, above all, on a careful study of the response of denuded tissues to the operations to which they are exposed. The determination of an optimum reaction of an irrigating solution and the response of the living cells to it require attention quite as well as its antiseptic properties or the route by which it can be made to penetrate wounds. The most skilful operator cannot avoid an insult to injured tissues if, blind to the physiologic principles involved in the nutrition of these living parts, he thinks and acts solely in terms of technic.

In a way it is unfortunate that so much interest is centered by the average advanced student in the purely operative aspects of his work so far as empirical methods are emphasized. The "clever operator" tends to be uppermost in his mind. The student has presumably been inducted into the bearing of a functional point of view during his first two years of study when the methods of the scientist preponderate in all his instruction. He must show proficiency in the sciences concerned with the origin of disease, because their importance is now universally admitted. But, as Macleod[2] has pointed out, when the surgical clinic is reached the methods of the scientist are all too frequently cast aside; and an understanding of disease is sought for largely by the empirical method, namely, by the endeavor to see and examine innumerable patients, to diagnose the case according to the grouping of the signs and symptoms, and to treat it by the prescribed methods of experience. Sir Clifford Allbutt proclaimed in his recent presidential address before the British Medical Association that the new birth of medicine is nothing less than the enlargement of medicine from an art of observation and empiricism to an applied science founded on research.[3] The sooner it is realized that real surgical success rests on physiologically sound thinking as well as on unique manual dexterity, the greater will be the prospect of renewed progress.

NEUROCIRCULATORY ASTHENIA

The careful examinations of thousands of soldiers by skilled medical observers during the past few years have served to bring into prominence various clinical manifestations which might have remained unemphasized or even undiscovered in the casual routine of peace-time practice. The necessity of eliminating the unfit from service and of detecting even latent defects of function has served to focus attention on many items of seemingly trifling import which military experience has gradually brought into more deserving prominence. This is particularly true of abnormalities, or perhaps one should call them inferiorities, of the nervous and vascular apparatus.

In this way a group of symptoms has been designated as neurocirculatory asthenia, sometimes as the "effort syndrome." This has appeared not only abroad but also in our American military camps. In the words of members of a cardiovascular board of the Medical Service of the Army, the signs are increased pulse rate, tremor of the fingers, and cold, moist hands which become cyanosed when dependent. The symptoms are precordial pain with dyspnea and palpitation on moderate exertion, such indications of vasomotor instability as dizziness, flushing and fainting, and a variety of other complaints, all pointing to a state of excessive reaction of the nervous system to psychic or physical strain.[1]

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[1] Horsley, J. S.: The Value of Biologic Principles in Surgical Practice, J. A. M. A. 72:1263 (May 3) 1919.

[2] Macleod, J. J. R.: Physiology and Biochemistry in Modern Medicine, St. Louis, 1918.

[3] The Clinical and Scientific Meeting of the British Medical Association, J. A. M. A. 72:1313 (May 3) 1919.

Symptoms of "nervous instability" are frequently and glibly referred to some derangement of thyroid function. A rapid pulse is a manifestation of heightened metabolism. The latter is a concomitant of various sorts of thyroidal upset. But it would be rash to assert that all undue stimulation of metabolism, and therefore all cases of augmented pulse rate, are referable to the thyroid for their genesis. Nevertheless, it seemed worth while to ascertain whether there is any frequent correlation of visible thyroid alteration, such as enlargement represents, with the appearance of the special symptoms and signs of neurocirculatory asthenia. The comparisons drawn by Addis and Kerr[1] at Camp Lewis, American Lake, Washington, on recruits from that state as well as from Oregon and California fail to confirm the prevalent impression that thyroid enlargement is almost constantly present in persons exhibiting the effort syndrome. Thus the development of "toxic goiter" can scarcely be the cause of the syndrome, even in persons with enlarged thyroid. Addis and Kerr assert that the enlargement of this gland in such cases is incidental and not causative. For practical consideration they add that there is no reason why cases of thyroid enlargement with the syndrome should be considered as in any essential respect different from those without thyroid enlargement, nor any reason why the treatment and the disposition of these cases should necessarily be altered by the thyroid enlargement as such.

NATIVITY OF PARENTS AS A FACTOR IN INFANT MORTALITY

Statistics have often become the subject of ridicule, and rightly so, when they have been applied to the problems of human betterment. Indeed, it may be stated with presumable fairness that few medically trained persons are really competent to use statistics in a scientific manner. When, however, the professional statistician "juggles the figures," they gain a sort of recognition which is otherwise rarely accorded to them. These comments are the prelude to a consideration of the high rate of infant morbidity and mortality which still exists in various parts of this country. It has long been evident that any effective program for remedying the existing conditions must be based on a careful analysis of available statistical data. A recently published study by Eastman[2] of the Division of Vital Statistics of the New York State Department of Health has furnished food for thought as to the direction to be taken by future measures for the conservation or betterment of child life. It shows, as might be expected, that where an unfavorable sanitary environment is likely to be found, deaths from communicable, respiratory and gastro-intestinal disease are abundant. This is the case among the foreign-born population, the majority of whom, Eastman points out, are poor, illiterate, without knowledge of English, and almost wholly ignorant of the elements of modern sanitation, and inhabit, as a rule, the most congested districts of the large manufacturing centers. On the other hand, Eastman avers, the superior environment and intelligence of the average native woman is reflected in the comparatively low mortality of her babies from these diseases.

The great majority of deaths of children above 1 month of age are caused by the diseases already mentioned. Despite this contrast between the untutored foreigner and the native stock, it is a statistical fact that in New York State the mortality of babies under 1 month of age is higher among those born to native mothers than among children born of women of foreign nativity. Although the mortality of children in 1916 under 1 year of age born of native women was only 87 per thousand births, compared with 108.4 for children of foreign born mothers, the rate under 1 month for the former was 47.4, as against 45.2 for the latter. About three quarters of the deaths of infants under 1 month of age are due to prenatal causes. Of the total number of deaths occurring in 1916 within the first day after birth, more than 60 per cent. were due to premature birth, 13 per cent. to congenital debility and malformations, and nearly 15 per cent. to injuries at birth, amounting in all to about 88 per cent.

All workers for social betterment realize the beneficent possibilities of efforts to reduce infant mortality where unhygienic factors like overcrowding, improper feeding, imperfect sanitation and other comparable and remediable conditions prevail. The new study just reported indicates that amid our concern for the dangers arising from ignorance and indifference we must not be oblivious to the fact that insanitary environment is not the only matter deserving of serious consideration in any campaign for child welfare. Deaths from premature birth and congenital causes have different explanations, among which venereal disease and alcoholism are to be found. Hence Eastman wisely advises that if the population of any section is discovered to be preponderantly native, the proper course to be adopted should be mainly one of education in regard to prenatal conditions. If it is found to be largely of foreign born stock, it will be necessary to plan principally for a course of instruction in the proper feeding and care of the infant and for the improvement of sanitation. This procedure, Eastman adds, would seem to be both rational and practicable, and should be the basis of all future campaigns for infant welfare that aim at efficiency and success.

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[1] Addis, Thomas, and Kerr, W. J.: The Relative Frequency in Recruits With and Without Thyroid Enlargement of Certain Signs and Symptoms Which Occur in Neurocirculatory Asthenia, Arch. Int. Med. **23**: 316 (March) 1919.

[2] Eastman, P. R.: The Relation of Parental Nativity to the Infant Mortality of New York State, Am. J. Dis. Child. **17**: 195 (March) 1919.

WHAT THE UNITED STATES SUPREME COURT THINKS OF FORMULA DISCLOSURE —IN FOODS

On April 14, 1919, the United States Supreme Court handed down a decision of the highest importance to those interested in questions of public health. The question before the court was one dealing with the right of a state to require manufacturers of proprietary foods to print on the labels of their products the names and quantities of the ingredients. This right had been attacked by the manufacturers of a proprietary food, who charged that the state's requirement was a violation of their constitutional guaranties in that it amounted to taking their property without due process of law. This argument was based on the fact that the proprietary food product was made under a secret formula, and that to disclose that formula would cause the manufacturer great and irreparable damage. The Supreme Court's answer to this argument is definite and to the point:

> ". . . it is too plain for argument that a manufacturer or vendor has no constitutional right to sell goods without giving to the purchaser fair information of what it is that is being sold. The right of a manufacturer to maintain secrecy as to his compounds and processes must be held subject to the right of the state, in the exercise of its police power and in promotion of fair dealing, to require that the nature of the product be fairly set forth."

Briefly, the facts in the case were these: The Corn Products Refining Co. of Illinois makes, among other preparations, a proprietary table syrup that is composed of 85 per cent. glucose (euphemistically known as "corn syrup"), 10 per cent. molasses, and 5 per cent. sorghum. This mixture was sold under the proprietary name "Mary Jane." The labels on the tins declared that the product was "A Table Syrup Prepared from Corn Syrup, Molasses and Pure Country Sorghum. Contains Sulphur Dioxid."

The state of Kansas has a good pure food law and, what is equally important, it seems to have officials that will enforce the law. One of the requirements of the Kansas law is that manufacturers of proprietary foods must state on the label the names and percentages of the materials used, and specifically in the case of syrups "the principal label shall state definitely, in conspicuous letters, the percentages of each ingredient, in the case of compounds, mixtures, imitations or blends." As "Mary Jane" was obviously a compound, and as the labels did not give the percentages of the ingredients, the Kansas State Board of Health notified those who were selling "Mary Jane" that unless the syrup was plainly labeled a compound and the percentages of each ingredient were given, there would be arrests and prosecutions. As a result of this action, the Corn Products Refining Company brought action against the members of the board of health, declaring in effect that the requirements of the board were in conflict with the constitution of the United States, both as regards the interstate commerce clause, and as pertaining to the Fourteenth amendment. They also claimed that it was in conflict with the federal Food and Drugs Act.

The case came to trial in a district court, in which the glucose concern won, that court ordering that a perpetual injunction should be issued restricting the State Board of Health of Kansas from interfering with the sale of "Mary Jane." The board of health appealed the case to the Supreme Court of Kansas, which court, having a better appreciation of the interests of the public, reversed the judgment of the district court. The Corn Products Refining Company then carried the case up to the Supreme Court of the United States, with the result that the judgment of the Kansas Supreme Court was upheld. It now becomes a matter of record from the highest court in the land that secret formulas of proprietary foods, at least, are not the holy and inviolable things that the proprietors thereof would have us believe. Slowly the old order passes. The rights of property, held in the past, by the interpretation of the courts, as paramount to the rights of health, are gradually assuming their proper relation in the scheme of a rational state.

THE PREVENTION OF PNEUMONIA BY *INOCULATION*

An able clinician and investigator whose interest has centered chiefly on the pneumonia problem remarked recently that "the more cases of pneumonia he treated the less treatment they got." It was a healthy confession of our present limitation in therapeusis which only adds emphasis to the value of the preventive measures that have been developed during recent years. To this advance American medicine has contributed its full share.

Following the promising but inexact experiments of Wright in South Africa, it will be recalled that Lister[1] carried out prophylactic immunization in a large number of Rand mine workers, using a composite vaccine made from pneumococcus types prevalent in that region. Lister at first tried intravenous injections; later, however, he found that subcutaneous injections were sufficient to establish an immunity against infection. This protection was almost 100 per cent. efficient against the particular types of pneumococci used in the vaccine, thereby justifying the belief that prevention of pneumonia by vaccines was a feasible procedure. We now have available for study the results of two similar series of prophylactic inoculations made at Camp Upton by Cecil and Austin[2] and at Camp Wheeler by

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[1] Lister. F. S.: An Experimental Study of Prophylactic Inoculation Against Pneumococcal Infection in the Rabbit and in Man, South African Institute for Medical Research, 8: 1916; Prophylactic Inoculation of Man Against Pneumococcal Infections and More Particularly Against Lobar Pneumonia, South African Institute for Medical Research, 10: 1917.

[2] Cecil, R. L., and Austin, J. H.: Prophylactic Inoculation Against Pneumococcus, J. Exper. Med. 28: 19 (July) 1918.

Cecil and Vaughan[3] which seem to confirm the work of Lister.

At Camp Upton Cecil and Austin used a saline pneumococcus vaccine containing Types I, II and III. Of this vaccine three or four doses were given at weekly intervals. The first dose contained three billion organisms, the final doses from six to seven and one-half billion. Some twelve thousand seasoned troops were inoculated, which number represented approximately 40 per cent. of the strength of the entire command. While the period of observation after the inoculation was unfortunately a brief one (ten weeks), definite evidence of protection was made apparent by the fact that no cases of pneumonia of Types I, II or III occurred in the vaccinated groups, while twenty-six cases due to these types of infection originated in the unvaccinated groups. Only seventeen cases of pneumonia of all types (including Type IV and the streptococcic) developed among the vaccinated as contrasted with 172 cases among the unvaccinated men.

At Camp Wheeler Cecil and Vaughan found it possible to immunize virtually 80 per cent. of the total command, but the conditions differed materially from those at Camp Upton in several respects: first, that a large number of the troops were recruits and consequently more susceptible to the disease (the difference in the susceptibility to pneumonia between seasoned troops and recruits has been recently discussed by Opie and his associates[4]); second, that the work was complicated by the influenza epidemic, and third, that a lipovaccine was substituted for the saline vaccine previously used. This vaccine, as described by Fennel,[5] contained the three types of pneumococci in a dosage of ten billion organisms per cubic centimeter and only one injection was required for complete immunization.

The study had to be discontinued when demobilization was begun, but it covered a period of approximately three months. During this time 363 cases of pneumonia of all varieties occurred among the vaccinated men (80 per cent. of the total command) and 327 cases among the unvaccinated (20 per cent. of the command); almost as many, therefore, among the unvaccinated one fifth as among the vaccinated four fifths. Excluding cases that developed within one week after the inoculation, namely, before protection of any kind could be expected to have developed, only eight cases of Type I, II and III pneumonia developed among the vaccinated men. These were all secondary to severe cases of influenza.

When the incidence of the pneumonia among recruits, on the one hand, is studied, it is found that per thousand men the incidence was twice as great for the unvaccinated as compared with the vaccinated recruit. In the seasoned troops, on the other hand, the difference was even greater, for there were almost seven times as many cases among the unvaccinated as among the vaccinated men, an observation that leads Cecil and Vaughan to the belief that the proper time to vaccinate recruits is two or three weeks before they are inducted into service in the camps. As a result of their work they have reached the conclusion that even in civil life, where pneumonia outranks other infectious diseases in the mortality list, inoculation against pneumonia will find a large field of usefulness, especially when relatively nontoxic vaccines such as lipovaccines are available. Their observation, too, that absolutely no evidence exists that such prophylactic vaccination is followed, even temporarily, by a so-called "negative phase" or period of lowered resistance to the disease against which protection is sought is also reassuring.

Current Comment

THE PRUDERY OF THE PRESS

All efforts to diminish the spread of venereal diseases have encountered as a real obstruction a peculiar prudery in the American press. In his recent work on "The American Language" Mr. H. L. Mencken calls attention to the fact that the department of health in New York City in 1914 announced that its efforts to diminish venereal diseases were handicapped because "in most newspaper offices the words syphilis or gonorrhea are still taboo and without the use of these terms it is almost impossible to correctly state the problem." The Army Medical Corps in the early part of 1918 also encountered the same difficulty; most newspapers refused to print its bulletins regarding venereal disease in the Army. "One of the newspaper trade journals thereupon," Mencken says, "sought the opinions of editors upon the subject and all of them save one declared against the use of the two words." One editor placed the blame on the postoffice, and another reported that "at a recent conference of the Scripps Northwest League Editors" it was decided that "the use of such terms as gonorrhea, syphilis, and even venereal diseases would not add to the tone of the papers, and that the term vice diseases can be readily substituted." Mr. Mencken is of the opinion that the most Pecksniffian of American cities is Philadelphia, and he cites as a conspicuous example the change by the *Public Ledger* of the words "a virgin" to "a young girl." When the motion picture entitled "To Hell with the Kaiser" was advertised under government patronage, all of the Philadelphia billboards changed the announcement to read "To H—— with the Kaiser." Most of our readers know the numerous synonyms used by the press for syphilis, among them "blood poisoning," "social evil" and "social disease." Apparently the press has been unable to coin a word for gonorrhea and the subject is merely tabooed. The campaign against venereal diseases depends largely on education of the public. Is the prudery of the press to continue to hinder such education?

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[3] Cecil, R. L., and Vaughan, H. F.: Results of Prophylactic Inoculation Against Pneumonia at Camp Wheeler, J. Exper. Med. **29**: 457, 1919.

[4] Opie, E. L., et al.: Pneumonia at Camp Funston, J. A. M. A. **72**: 108 (Jan. 11) 1919; Pneumonia Following Influenza (at Camp Pike, Ark.), J. A. M. A. **72**: 556 (Feb. 22) 1919.

[5] Fennel, Eric A.: Prophylactic Inoculation Against Pneumonia, J. A. M. A. **71**: 2115 (Dec. 28) 1918.

FOOD AND HEALTH IN THE ARMY

The lessons of the interrelations between good physique, physical exercise and adequate nutrition, as exemplified in observations made in our army camps are too significant to be forgotten amid the altered interests of peace times. Accurate measurements were made by skilled observers on unusually large numbers of young men and as a result an exceptional amount of statistical information is now available with respect to many factors bearing on personal hygiene. Hildebrandt[1] of the Section of Food and Nutrition, Medical Department, U. S. Army, in a study of the gains made by certain recruits, found that there was an increment of several pounds in body weight, together with an unquestionable increase in the motility of the chest. This was a characteristic indication of the improvement in the physical condition of the men. The study at Camp Pike showed in an illuminating way how the gain in weight is attended with increased food consumption. Owing to the efficient service of the nutritional officers the diet in the Army has become reasonably economical, and the waste of edible food—a source of widespread complaint in the early days of the war—has been greatly reduced. Leftovers from the kitchen are being utilized in subsequent meals, and mess kits are emptied at the table. According to Hildebrandt the average energy value of the food consumed per man per day in the groups thus investigated was 3,700 calories, a figure typical of the consumption found in army messes generally. The demonstration that the typical army mess has furnished a sufficient amount of nutritious food to meet the requirements of active, vigorous young men will permit those concerned with the feeding of large groups in the future to apply these experiences to their own problems.

NO FLIES—NO MOSQUITOES

The United States Public Health Service has just issued, and will supply in quantities, two posters which aim at arousing a general interest in the prevention and control of two insects which are responsible for a great deal of disease in this country. We refer, of course, to the mosquito and the fly. The posters, in addition to enumerating the diseases and losses produced from this source, contain detailed information in regard to the most practical measures for freeing a community from both pests. A good purpose would be served by having both posters freely displayed to focus public attention on the matter. When people realize the unnecessary economic and human loss caused by flies and mosquitoes we may be able ultimately to reach a time when towns and homes will take the same pride in displaying posters announcing the fact that they are free from mosquitoes and flies that they now take in exhibiting Liberty Loan honor flags. As one of the posters of the Public Health Service reminds us, any campaign of this sort must begin as early as practicable, for a pair of flies or mosquitoes hatched in April may give origin to millions by August. The thing to do is to keep the first pair from breeding.

Association News

THE ATLANTIC CITY SESSION

Moving Picture Theater to Show Scientific Work

One of the features of the Atlantic City Session, June 9-13, will be the moving picture theater, a part of the Scientific Exhibit. Casino Hall, on the second floor of the Casino, Steel Pier, has been secured. It is completely equipped with stage, screen, projecting apparatus and seats for 1,000. A continuous exhibit will be held on Tuesday, Wednesday, Thursday and Friday from 9 a. m. to 3 p. m., running through the noon hour, so that Fellows in section meetings will have an opportunity to attend the moving picture exhibit during the noon intermission. A large number of beautiful and interesting moving picture films furnished by the Medical Department of the Army, the Bureau of Medicine and Surgery of the Navy and the U. S. Public Health Service will illustrate the work of the medical officers in the Army and Navy as well as various public health questions. In addition a large number of private exhibitors will demonstrate lantern slides, roentgen-ray plates and moving picture films on various scientific subjects. A half-hour illustrated lecture will be given each day on some phase of the work on nostrums and proprietary preparations of The Journal of the American Medical Association. Admission will be free to all persons wearing the Association button. The program for each day will appear in the *Bulletin*.

Medical Mobilization and the War

Personnel of the Medical Department

For the week ending May 16, there were 15,840 officers in the Medical Corps, a decrease of 1,720 from the previous week. The Medical Reserve Corps contained 1,915 officers. The total number of medical officers discharged since the beginning of the war is 16,302.

Distinguished Service Medal to Col. Frank Billings

Col. Frank Billings, Chicago, M. C., U. S. Army, has been awarded the D. S. M. for "exceptionally meritorious and conspicuous service in the organization and administration of the division of reconstruction of the medical department."

Distinguished Service Awards

Major-General Thomas H. Barry, U. S. Army, presented the Distinguished Service Medal to Burton J. Lee, Col., M. C., New York City, and to Harold E. Foster, Lieut., M. C., U. S. Army, Castile, N. Y., who recently returned after eighteen months' service abroad, was twice cited by the British for bravery under fire and received the British War Cross.

Allied Medical Society of Northern Russia

Some weeks ago the allied medical officers of the troops in northern Russia organized the Allied Medical Society of Northern Russia. Meetings have been held every two weeks. On March 26 a meeting was held at the American Red Cross Hospital in Archangel. Cases were presented and following the presentation of each case occurred an interesting general discussion. The program included presentations by Majors J. R. Longley and W. H. Henry and Capt. C. O. Greenleaf of the Medical Corps, U. S. Army.

Service of Students' Corps Acknowledged

The status of the Students' Army Training Corps as an integral part of the Army has been definitely established by recent action of the War Department in amending the orders concerning the award of the Victory Medal so as to include the members of the S. A. T. C. in the list of those eligible. Following the publication of the order (G. O. 48) concerning

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1. Hildebrandt, F. M.: Some Physical Improvements in National Army Men Under Military Training, Science 49: 404 (April 25) 1919.

the award of the Service Medal by General March, the War Department was asked for a decision concerning the status of the student organizations. Some communities have asked for an opinion as to whether members of the S. A. T. C. should be included memorials. In reply to these questions the War Department has said that the members of the S. A. T. C. properly inducted into the service were on active duty in the U. S. Army and were an integral part of the land forces. This decision is acknowledgment of the service of the S. A. T. C. by the War Department.

HONORABLE DISCHARGES, MEDICAL CORPS, U. S. ARMY

Note.—In the following list, L. signifies lieutenant; C., captain; M., major; L. C., lieutenant-colonel; Col., colonel, and B.-G., brigadier-general.

ALABAMA

Birmingham—Bragg, J. C. (L.)
    Nolan, M. M. (M.)
Blocton—Smith, E. B. (L.)
Ensley—Lovelady, R. G. (C.)
Eufaula—Fenn, J. W. (C.)
Fairhope—Hodgson, S. H. (C.)
LaFayette—Ramage, R. B. (C.)
Mobile—Oates, W. H. (M.)
Montgomery—McCall, J. W. (L.)
Selma—Doherty, D. H. (C.)
    Jackson, H. F. (L.)
Tallassee—Weldon, J. M. (L.)
Tuscaloosa — McKenzie, A. B. (C.)

ARIZONA

Nogalez—Wiley, C. B. (C.)

ARKANSAS

Beirne—Lassiter, W. D. (L.)
Booneville—Hederick, A. R. (M.)
De Witt—Kelley, A. G. (L.)
Gregory—Maguire, F. C. (C.)
Hot Springs—King, O. H. (L.)
Little Rock—Eubanks, R. M. (C.)
    Hearn, A. G. (C.)
Marvell—Brooks, G. A. (L.)
Osceola—Sheddan, W. J. (C.)
Pine Bluff—Wallin, L. (L.)
Seyppel—Ledford, H. P. (L.)

CALIFORNIA

Berkeley—Forbes, H. S. (C.)
    Pape, E. H. (L.)
Eagleville—Kennedy, M. R. (C.)
French Camp—Tretheway, L. E. (L.)
Livermore—Mack, C. W. (C.)
Los Angeles—Byron, R. L. (C.)
    Farnsworth, D. C. (C.)
    Jesberg, S. H. (C.)
    Jones, I. W. (C.)
    Mann, H. H. (L.)
    Miller, J. L. (C.)
    Myers, T. C. (C.)
    Rea, R. R. (C.)
    Roen, P. B. (L.)
    Wilson, J. C. (C.)
Oakland—Rehfisch, J. M. (C.)
Pasadena—Mattison, S. J. (C.)
Pomona—Seaver, H. C. (C.)
Riverside—Jones, W. A. (M.)
Sacramento—Moody, A. M. (M.)
[illegible] T. R. (C.)
    Mills, H. W. (C.)
San Francisco — Bruman, A. K. (C.)
    Falconer, E. H. (C.)
    Gibson, A. C. (C.)
    Kavanagh, J. J. (L.)
    Woolsey, J. H. (C.)
San Jose—Richards, C. M. (C.)
San Rafael—Dufficy, R. G. (M.)
Santa Barbara—Soper, A. C. (M.)
Sawtelle—Hromadka, A. B. (C.)
Ventura—Lewis, W. J. (M.)

COLORADO

Colorado Springs—Mullin, W. V. (L.)
Denver—Grant, W. W. (M.)
    Hall, J. N. (M.)
    Ingraham, C. B. (M.)
    Ruegnitz, L. H. (L.)
    Swerdfeger, E. B. (C.)
Greeley—Knowles, E. W. (C.)
Portland—Davis, T. A. (L.)

CONNECTICUT

Bridgeport—Lawler, D. H. (C.)
    Patterson, D. C. (C.)
    Powers, J. T. H. (L.)
    Schuele, G. J. (L.)
    Sprague, C. H. (C.)
Hartford—Miller, J. R. (C.)
    O'Brien, J. F. (L.)
Higganum—Loewe, L. J. (C.)
Meriden—Smith, D. P. (C.)
Middletown—Sandy, W. C. (C.)
New Haven—Collins, W. F. (C.)
    Davidson, H. P. (L.)
    Gettings, J. A. (C.)
    Weed, A. R. (C.)
New London—Douglass, W. L. (L.)
Norwalk—Morrison, F. J. (L.)
Shelton—Smith, C. S. (C.)
Waterbury—Crane, A. A. (C.)

DELAWARE

Lewes—Beebe, R. C. (C.)
Wilmington—Lotz, A. K. (L.)
    Samuel, M. I. (M.)

DISTRICT OF COLUMBIA

Washington — Randolph, B. M. (M.)
    Schoenfeld, J. H. (L.)
    Zinkhan, P. H. (M.)

FLORIDA

Jacksonville—Mitchell, G. M. (C.)
Marianna—Hodges, G. S. (L.)
Miami—Brunner, E. C. (L.)
Panama City — Cawthon, W. D. (L.)

GEORGIA

Atlanta—Derr, J. S. (M.)
    Ridley, R. B., Jr. (C.)
    Tribble, N. O. (L.)
Cochran—Dykes, C. Q. (L.)
Columbus—Peacock, C. A. (C.)
Dublin—Cheek, O. H. (L.)
Enigma—Parker, G. R. (C.)
Fitzgerald—McElroy, J. W. (L.)
Hilton—Reed, C. (L.)
Macon—Hinton, C. C. (L.)
    Holmes, J. P. (C.)
    Holmes, W. R. (L.)
Marietta—Blair, L. L. (C.)
Savannah—Turner, D. L., Jr. (C.)
Social Circle — Mobley, W. E. (L.)
    Upshaw, H. L. (L.)

IDAHO

Boise—Laubaugh, E. E. (C.)
St. Marcus—MacRae, R. D. (L.)

ILLINOIS

Alton—Hastings, J. B. (M.)
Chicago—Black, P. (L.)
    Buckman, E. (L.)
    Burke, A. W. (C.)
    Burmeister, W. H. (C.)
    Byfield, A. F. (C.)
    Cody, M. M. (L.)
    Corcoran, E. A. (L.)
    Flannery, R. E. (C.)
    Gradle, W. S. (M.)
    Gran, A. G. (L.)
    Harris, C. F. (L.)
    Irons, E. E. (L. C.)
    Jacobson, C. A. (L.)
    Kadlec, F. S. (L.)
    Kraft, S. H. (C.)
    McEvers, A. E. (M.)
    Oliver, P. (M.)
    Potts, H. A. (M.)
    Reed, W. K. (L.)
    Sarma, P. J. (L.)
    Slaymaker, S. R. (M.)
    Speed, K. (M.)
    Talbot, E. S., Jr. (C.)
    VanderKlott, A. (L.)
    Wilcox, J. B. (L.)
Coal City—Stockdale, F. A. (C.)
Crete—Blim, S. P. (C.)
Evanston—Christopher, F. (L.)
    Hagan, J. L. (C.)
Hanna City — Needham, W. S. (L.)
Homer—Tate, E. F. (L.)
Illiopolis—Dugan, R. D. (L.)
Joliet—Kimball, J. C. (C.)
Kampsville—Woltmann, F. (L.)
Kankakee—Roth, J. H. (C.)
[illegible] T. (M.)
[illegible] (C.)
[illegible] (C.)
Oak Forest — Spaulding, O. R. (L.)
Oak Park—Bartling, C. H. (C.)
    Potter, W. E. (C.)
    Sylvester, F. M. (L.)
Peoria—Easton, S. H. (L.)
    Simpson, O. W. (L.)
Plainfield—Ryden, F. A. (C.)
Rockford—Moore, H. F. (L.)
St. Peter—Yates, F. H. (L.)
Villa Grove—Herrin, P. (L.)
Woodstock—Baccus, C. F. (C.)

INDIANA

Atlanta—Bills, L. F. (L.)
Brook—Larrison, G. D. (L.)
Carmel—Cooper, R. A. (L.)
Dale—McClary, D. V. (C.)
Fort Wayne—Drayer, L. P. (M.)
    Ray, H. A. (C.)
    Rhamy, B. W. (C.)
[illegible] (L.)
[illegible]y, E. H. (C.)
    McCulloch, C. B. (L. C.)
    Noble, T. B. (L.)
    Royster, W. L. (C.)
    Wheeler, H H. (C.)
    Winter, E. G. (L.)
Jeffersonville—Funk, A. (C.)
National Military Home—Peters, C. E. (L.)
New Harmony — Fitzgerald, K. C. (L.)
Odon—Bowman, I. E. (C.)
Princeton—Rhodes, A. H. (L.)
Seymour—Niles, J. H. (C.)
South Whitley—Hart, B. D. (L.)
Summitville—Mobley, L. F. (M.)
Terre Haute—Breaks, L. Z. (C.)
    Fink, O. E. (C.)
Tipton—Recobs, R. M. (C.)
Vincennes—Bryan, C. S. (L.)

IOWA

Algona—Fraser, W. (L.)
Bedford—Sollis, D. B. (L.)
Cedar Rapids — Cogswell, C. H. (M.)
Murray, F. G. (M.)
Cherokee—Johnson, C. H. (L.)
Clarion—Thompkins, E. D. (C.)
Clermont—Carr, L. L. (L.)
Council Bluffs—Hill, C. A. (C.)
    McAtee, J. S. (C.)
Des Moines—Ruth, C. E. (M.)
Dubuque—Brownson, O. A. (L.)
Hampton—Rhine, A. C. (L.)
Jesup—Shimer, F. E. (L.)
Kirkman—Sabin, A. E. (C.)
Mystic—Lugar, L. L. (C.)
Oskaloosa—Johnston, K. L. (L.)
Ottumwa—Edgerly, E. T. (M.)
    Herric, J. F. (M.)
Riverside—Maresh, G. (C.)
Summitville—Saar, J. L. (L.)
Waterloo — Jenks, W. H., Jr. (C.)
Webster City—Richardson, E. E. (L.)
Wellman—Austin, H. M. (C.)

KANSAS

Alma—Mielke, C. H. (M.)
Garden City—Edwards, J. B. (L.)
Girard—McNaught, J. F. (L.)
Gypsum—Cheney, E. R. (L.)
Hazelton—Welsh, W. L. (C.)
Hutchinson—Mundell, W. N. (C.)
Kansas City — Boughnou, H. P. (C.)
Longton—Burr, W. B. (L.)
Sabetha—Hibbard, S. M. (C.)
Tescott—Vermillion, E. L. (L.)
Wichita—Horn, H. W. (M.)
    Purves, G. K. (C.)

KENTUCKY

Bowling Green—Curry, D. P., Jr. (C.)
Louisville—Kahn, L. H. (C.)
    Kelly, G. C. (C.)
    Koontz, F. L. (C.)
    Meyers, S. J. (L. C.)
    Pelle, H. L. (C.)
    Pirtle, R. T. (C.)
    Woodard, H. C. (C.)
Madisonville—Long, R. W. (C.)
Russell—Vidt, C. E. (L.)
Smith Grove—Grider, J. A. (L.)
Terryville—Skaggs, H. R. (L.)

LOUISIANA

Alexandria—Rand, P. K. (C.)
Athens—Atkins, W. L. (L.)
Clarks—King, B. F. (C.)
Jackson—Truitt, R. C. P. (M.)
New Orleans—Bowie, E. R. (C.)
    Bradburn, M. (C.)
    Couret, M. J. (M.)
    Fenner, E. D. (M.)
    Ficklen, E. P. A. (M.)
    Fortier, L. A. (L.)
    Jamison, S. C. (M.)
    Lacroix, P. G. (C.)
    Leake, W. W. (M.)
    Page, J. H. (L.)
    Rhyne, A. W. (C.)
    Scott, W. F. (C.)
    Smyth, J. (L. C.)
    Talbot, P. T. (C.)

MAINE

Bangor—Peters, W. C. (M.)
    Robinson, H. L. (C.)
Brewer—Ford, L. H. (C.)
Caribau—Gregory, F. L. (C.)
Madison—Vose, S. N. (L.)

MARYLAND

Baltimore—Boggs, T. R. (Col.)
    Brady, L. (L.)
    Feldman, M. (L.)
    Gaddess, H. W. (C.)
    King, C. P. (C.)
    Payawall, J. L. (L.)
    Rosenthal, L. J. (L. C.)
    Smith, D. C. W. (C.)
    Thomas, E. P. (L.)
    Wolfe, H. D. (C.)
Cumberland—Frantz, W. R. (C.)
    Williams, W. F., Jr. (C.)
Frostburg—Cobey, J. C. (C.)
Millersville—Cecil, H. L. (C.)
Williamsport—Zimmerman, I. M. (C.)

MASSACHUSETTS

Boston—Badger, G. S. C. (M.)
    Binney, H. (L. C.)
    Bogan, F. L. (M.)
    Clute, H. M. (M.)
    Erlenbach, J. H. (C.)
    Green, H. (C.)
    Gunter, F. C. (C.)
    Lahey, F. H. (M.)
    Lake, L. (L.)
    Miller, R. H. (M.)
    Moore, H. (M.)
    Nowell, H. W. (C.)
    Ober, F. R. (M.)
    Papen, G. W. (C.)
    Rackemann, F. M. (L.)
    Ripley, H. W. (L.)
    Sheehan, E. B. (C.)
    Sowles, H. K. (C)
    Towne, E. B. (M.)
    Vogel, G. L. (C.)
    Wesselhofft, W. F. (L. C.)
    Withington, P. R. (C.)
    Woody, M. (L.)
    Young, E. B. (C.)
Brookline——Cutler, E. C. (M.)
Cambridge—Rockwell, J. A. (M.)
    Thomas, W. K. S. (M.)
Dorchester Center — Dobson, W. M. (M.)
Framingham—Glass, J. (M.)
    Owen, A. S. (C)
Lexington—Walsh, J. J. (C.)
Lowell—Jones, R. L. (C.)
    Pulsifer, N. (M.)
Malden—Gay, F. W. (C.)
New Bedford — Choquette, H. (M.)
Newton—Lowry, F. P. (L.)
Rockland—Dunn, J. H. (C.)
Springfield — Chapin, W. A. R. (C.)
    Johnston, C. C. (C.)
    Wheat, H. R. (C.)
Taunton—Pierce, R. A. (C.)
Topsfield—Jenkins, T. L. (L. C.)
Watertown—Belding, D. L. (C.)
Waverly—Brown, C. P. (C.)
Westboro—Shealey, M. J. (L.)
Worcester—Salmon, C. A. (L.)

MICHIGAN

Adrian—Stafford, L. J. (C.)
Ann Arbor — Hammell, H. H. (M.)
    Karshner, R. G. (L.)
Battle Creek—Hoyt, A. A. (C.)
Bay City—Scrafford, R. E. (C.)
Detroit—Campbell, D. A. (M.)
    Cullen, E. K. (M.)
    Cushman, H. P. (C.)
    Dodds, J. C. (M.)
    Froude, P. I. (C.)
    Green, S. W. (L.)
    Kovinsky, A. (L.)
    LaFerte, A. D. (M.)
    Lawrence, W. C. (C.)

Detroit—Mayhew, D. P. (C.)
Parmeter, R. (L. C.)
Pyle, W. V. (M.)
Seeley, J. B. (C.)
Spitzley, W. A. (M.)
Stirling, A. M. (M.)
Sullivan, H. A. (C.)
Van Gundy, C. R. (L.)
Wilson, F. N. (M.)
Flint—Clift, M. W. (M.)
Randall, H. E. (M.)
Free Soil—Spencer, C. M. (L.)
Grand Rapids—Peppler, J. F. (C.)
Grosse Point—Torrey, H. N. (L. C.)
Kalamazoo—Balch, R. E. (M.)
Lake City—*Doudna, J. F.* (C.)
Menominee—Elwood, C. R. (C.)
Sethney, H. T. (M.)
Middleville—Swift, B. C. (C.)
Otsego—Hudnutt, O. D. (C.)
Owosso—Parker, J. O. (C.)
Plainwell—Vaughan, W. R. (L.)
Romeo—Miller, E. J. (L.)
Sault Ste. Marie—Winslow, R. C. (M.)
St. Clair—Carney, F. V. (C.)
Washington — Lockwood, C. B. (C.)

MINNESOTA

Holdingford—*Watson*, J. D. (L.)
Minneapolis—Beard, A. H. (M.)
Haskell, A. I. (C.)
Henrici, A. T. (C.)
Kremer, *W. J.* (L.)
Parks, A. H. (C.)
Sivertsen, I. (C.)
Morris—Fitzgerald, E. T. (C.)
Red Lake Falls—Wilkinson, J. C. (C.)
Rochester—Berkman, D. M. (M.)
Buie, L. A. (L.)
Davis, D. (C.)
Hayes, J. M. (C.)
McVay, J. R. (L.)
Mussey, R. D. (M.)
Redelings, L. H. (L.)
Vinson, P. P. (L.)
Virginia—Ground, H. T. (L.)
Walnut Grove—Jamieson, E. (C.)
Waterville — Weinburgh, H. B. (L.)

MISSISSIPPI

Hudsonville—Johnson, G. E. (L.)
Isola—Lester, W. C. (C.)
Jackson—Wood, J. H. (L.)

MISSOURI

Barnett—Leslie, J. F. (C.)
Cainesville—Evans, R. A. (L.)
Dexter—LaRue, F. (C.)
Farmington—Patton, W. G. (L.)
Jantha—Locker, G E (C.)
Kansas City—Aull, J. (C.)
Elliott, J. R. (C.)
Hedrick, H. B. (C.)
Henderson, J. P. (M.)
Hibbard, S. B. (C.)
Hoxie, G. H. (L. C.)
Jackson, W. R. (C.)
Kerley, G. L. (C.)
Krall, P. M. (M.)
Owens, M. J. (C.)
Shelton, W. A. (C.)
Williams, J. R. (M.)
Lentner—Wood, A. M. (L.)
Osceola—Smith, C. A. (C.)
Platte City—*Coffey*, G. C. (C.)
Springfield—Potts, J. M. (L.)
St. Joseph—Forstot, S. (L.)
St. Louis—Brickey, P. A. (L.)
Burdick, C. H. (L.)
Crossen, H. S. (M.)
Engleman, O. R. (L.)
Hyndman, C. E. (L.)
Lewald, J. (L.)
Loeb, V. (M.)
Macklin, L. P. (L.)
Martin, C. (M.)
McCulloch, H. (C.)
Payne, R. J. (M.)
Reilly, W. S. (L.)
Strauss, A. E. (C.)
Westlake, S. B. (C.)
White, T. W. (C.)
Young, W. B. (C.)

MONTANA

Bozeman—Seitz, R. E. (C.)
Butte—Flinn, H. J. (M.)
Glasgow—Hoyt, M. D. (M.)
Helena—Palmer, L. J. (C.)
Polson—Owen, G. B. (M.)
Roundup—Firey, W. I. (L.)

NEBRASKA

Ainsworth—Coleman, O. E. (L.)
Alma—Bartlett, W. C. (C.)
Eustis—Hale, N. T. (C.)
Hastings—Calbreath, C. B. (C.)
Hyannis—Howell, W. L. (L.)
Omaha—Stokes, A. C. (M.)
Wolcott, W. E. (L.)

NEVADA

Gardnerville—Howell, W. L. (L.)
Reno—*McKenzie, G.* (C.)

NEW HAMPSHIRE

Concord—Connor, H. J. (C.)
Pion, P. A. (L.)
Hanover—Bartlett, P. (M.)
Keene—Helff, J. R. (C.)
Osterhout, J. J. (C.)
Walker, C. S. (M.)
Nashua—Davis, S. G. (C.)
Seabrook—Drury, F. J. (C.)
Tilton—Huckins, T. H. (C.)

NEW JERSEY

Atlantic City—Weil, E. M. (C.)
Bayonne—Lipschitz, L. (C.)
Elmer—Black, M. S. (L.)
Ir [illegible] J. F. (L.)
Je [illegible] J. (C.)
Maver, W. W. (M.)
McCamey, K. E. (L.)
Maywood—Freeland, F. (M.)
Montclair—Benson, A. L. (C.)
Newark—Belott, J. A. (L.)
Griffiths, C. B. (C.)
Heilbrunn, J. (C.)
Sanford, J. R. (C.)
Orange—Rogers, H. (C.)
Salem—Green, D. W. (C.)
Trenton—Caso, H., Jr. (L.)
West Hoboken — Denis, L. A. (C.)

NEW MEXICO

Carrizozo—Johnson, F. H. (L.)
Roswell—Matthews, W. C. (L.)
Springer—Murray, L. F. (L.)

NEW YORK

Albany—Gaus, L. H. (L. C.)
Amsterdam—Seward, W. H. (L.)
Attica—Preston, W. D. (C.)
Binghamton—Kann, U. S. (M.)
Townsend, T. I. (C.)
Brooklyn—Bourke, V. V. (C.)
Clark, G. F. (C.)
Coogan, W. J. (C.)
D'Albora, J. B. (L.)
Ducret, H. S. (C.)
Egan, W. V. (L.)
Iason, A. H. (L.)
Kramer, A. S. (L.)
Loughlin, J. T. (C.)
Marino, A. W. M. (L.)
Reiss, G. S. (C.)
Rendich, R. A. (C.)
Sammis, G. F. (C.)
Slee, A. W. (M.)
Thompson, J. E. (C.)
Zabriskie, J. B. (C.)
Buffalo—Barone, A. L. (L.)
Barone, S. (C.)
Sachs, L. M. (L.)
Ceres—*Pfisterer*, F. J. (C.)
Cohoes—*Mitchell*, J. H., Jr. (C.)
Elmira—Erway, C. H. (C.)
Turnbull, R. A. (M.)
Floral Park—Davies, T. F. (C.)
Flushing—O'Neill, J. M. (L.)
Forest Hills—Humphreys, F. B. (L. C.)
Gloversville—Ehle, V. R. (L.)
Elithorp, R. L. (C.)
Hartsdale—Pappenheimer, A. M. (M.)
Hauppage—Donaldson, B. F. (M.)
Herkimer—Huyck, R. P. (C.)
Hornell—Kysor, L. M. (C.)
Kew Gardens—Smith, H. E. (L.)
Kings Park—Rosanoff, A. J. (M.)
Sanford, W. H. (C.)
Steckel, H. A. (C.)
Kingston—Snyder, F. (C.)
Middletown—Truex, S. L. (C.)
Mount Kisco—*Green*, A. R. (M.)
Mount Vernon—Levine, A. A. (L.)
Phipps, W. G. (L.)
New York—Adair, F. G. (C.)
Baehr, G. (L. C.)
Bancel, H. A. (C.)
Bartholomew, H .S. (M.)
Baumann, O. I. (L.)
Black, D. R. (C.)
Blake, L. W. (C.)
Bradbury, S. (C.)
Brooks, H. (L. C.)
Butler, C. T. (L.)
Cary, E. G. (M.)
Clark, A. S. (M.)
Clifton, E. G. (C.)
Conner, L. A. (Col.)
Darlington, C. G. (C.)
Day, H. L. (L.)
De Tuncq, G. P. (L.)
Dineen, P. A. L. (L.)
Dugdale, A. H. (L.)
Echeverria, F. J. (C.)
Exiner, M. (C.)
Fitz, R. (M.)
Fleming, M. L. (C.)
Fowler, E. P. (L. C.)
Gleich, M. (L.)
Grimberg, L. (C.)
Hammer, W. J. (M.)
Henschel, L. K. (C.)
Hirsch, S. (L.)
Kinsella, R. A. (M.)
Klingon, L. E. (L.)
Kopetzky, S. J. (Col.)
Kronman, D. E. (L.)
Lambert, A. (Col.)
Landy, J. A. (L.)
Lynn, C. W. (M.)
Mannheims, P. J. (C.)
Miller, H. R. (L.)
Mosenthal, H. O. (C.)
Orth, R. D. (L.)
Paddock,. R. (C.)
Pardee, H. E. B. (C.)
Prout, E. B. (L.)
Reich, A. M. (C.)
Shapiro, R. (L.)
Shine, F. W. (M.)
Slattery, G. N. (C.)
Smith, H. (L.)
Stewart, W. H. (M.)
Taylor, M. J. (L.)
Van Ingen, P. (L. C.)
Ward, M. H. (C.)
Worcester, J. N. (M.)
Oneonta—Cutler, A. W. (L. C.)
Oswego—Albertson, H. S. (C.)
Passaic—Reynolds, H. C. (M.)
Poughkeepsie—Thomson, A. W. (C.)
Rochester—Brogden, J. C. (L.)
Ewers, W. V. (L. C.)
Flynn, J. M. (C.)
Fowler, J. D. (C.)
Prince, H. L. (L.)
Sadden, H. A. (M.)
Veeder, W. H. (C.)
Rome—Williams, K. E. (C.)
Sararac Lake—Price, J. W. (M.)
Trudeau, F. B. (C.)
Saratoga Springs—Comstock, C. R. (M.)
Sidney—Loomis, R. H. (C.)
Staten Island—Herbig, F. J. (C.)
Syracuse—Barney, C. O. (C.)
Cain, M. A. (C.)
Meyers, A. D. (L.)
Sisson, W. R. (L.)
Sweet, E. V. (C.)
Van Duyn, E. S. (L. C.)
Utica—Devendorf, F. C. (C.)
Warsaw—Thomson, W. R. (C.)
Waterville—Randall, E. G. (C.)
Yonkers—Dougherty, W. J. (C.)

NORTH CAROLINA

Asheville—Ringer, P. H. (C.)
Charlotte—Hunter, W. M. (C.)
Garysburg—Parker, C. P. (C.)
Goldsboro—Daniels, R. L. (L.)
Mount Holly—Moore, B. D. (L.)
Saulston—*Person*, H. M. (L.)
Williamston—Buie, R. M. (C.)
Winston-Salem—Davies, T. W. (C.)

NORTH DAKOTA

Bowman—Mizener, M. (C.)
Minot—McCannel, A. J. (M.)

OHIO

Ada—Shank, R. A. (L.)
Akron—Wise, W. D. (C.)
Alliance—King, P. F. (C.)
Amherst—Miller, B. A. (L.)
Bellaine—Kirkland, C. W. (L.)
Bowling Green—Boyle, F. V. (M.)
Cardington—Bennett, W. S. (C.)
Cincinnati—Bader, E. R. (L.)
Behrman, O. (L.)
Betzner, C. W. (C.)
Biern, O. B. (C.)
Caldwell, J. A. (C.)
DeNeen, D. D. (C.)
Dorger, P. H. (L.)
Ford, S. (M.)
Gorton, L. W. (L.)
Morris, R. S. (L. C.)
Staley, R. W. (C.)
Twachtman, E. R. (C.)
Woodward, H. L. (M.)
Cleveland—Gernhard, W. E. (C.)
Gordon, H. J. (M.)
Hickin, F. W. (C.)
Kennerdell, T. R. (C.)
Leonard, W. M. (L.)
Luck, H. C. (C.)
Prichard, H. D. (L.)
Stoner, W. C. (L. C.)
Weihranch, H. V. (M.)
Coldwater—*Schirack*, C. J. (L.)
Columbus—Clark, E. M. (C.)
Grosvenor, F. B. (C.)
Conneaut—Wilson, H. (C.)
Dayton—Hewitt, A. E. (M.)
Kislig, F. K. (M.)
Webster, H. H. (L.)
Englewood—Furnas, E. E. (L.)
Glendale—Southworth, R. (C.)
Grand Junction—Shields, J. M. (C.)
Greenville—Hunter, M. C. (C.)
Kalida—Francis, W. J. (L.)
Kenton—Belt, L. L. (C.)
Lancaster—Lantz, J. M. (C.)
Lilly Chapel—Kerr, G. M. (C.)
Lima—Gamble, C. D. (M.)
Liman—Hay, V. H. (M.)
Mansfield—Smith, G. C. (C.)
McArthur—James, H. S. (L.)
Nashport—Wells, R. E. (C.)
Ottawa—Beardsley, C. O. (C.)
Pedro—Wiseman, O. (C.)
Portsmouth—Rapp, H. F. (C.)
Rock Creek—Scofield, C. (L.)
Sandusky—Graefe, H., Jr. (C.)
Shreve—Bertolette, H. B. (L. C.)
Springfield—Rinehart, J. H. (L.)
Webb, J. (C.)
Steubenville—Allsop, W. K. (C.)
Struthers—Fenton, R. W. (C.)
Toledo—Beckwith, H. K. (L.)
Beerman, J. F. (L.)
Brewer, L. A. (C.)
Eystone, F. L. (C.)
Ferneau, F. D. (M.)
Gillette, N. W. (C.)
Knisely, R. A. H. (L.)
Myers, F. (C.)
Schade, A. H. (M.)
Van Wert—Good, B. L. (L.)
Warren—Waller, C. C. (M.)
Wellston—Davis, D. W. (C.)
West Salem—Snyder, O. C. (C.)
Youngstown—Barrett, C. D. (C.)
Braun, E. J. (L.)
Buchanan, J. U. (C.)
Jones, M. P. (M.)
Nesbit, D. A. (C.)
Reed, C. M. (C.)
Zanesville—Sealover, W. F. (L.)
Sellers, C. P. (M.)

OKLAHOMA

Atwood—Berninger, W. B. (L.)
McAlester—Kirkpatrick, G. A. (C.)
Norman—Lowther, R. D. (L.)
O'Keene—*McCall*, P. C. (L.)
Oklahoma City—Long, R. D. (M.)
Tecumseh—Colvert, G. W. (L.)
Tulsa—Smith, R. V. (M.)
Tyrone—Akers, W. W. D. (C.)
Washington—Nunnery, E. E. (C.)

OREGON

Enterprise—Hockett, C. T. (C.)
Newberg—Rankin, J. S. (C.)
Oswego—Rockey, E. W. (C.)
Portland—McCollom, J. W. (L.)
Rockey, P. (M.)
Skene, W. H. (M.)

PENNSYLVANIA

Allentown—Herbst, W. F. (L.)
Ardmore—Cloud, J. H. (M.)
Bloomsburg—Yost, C. B. (L.)
Bridgeville—Clarke, H. G. (C.)
Bristoria—Coen, J. A. (L.)
Carlisle—Phillipy, W. T. (C.)
Castle *Shannon—Permar*, H. H. (M.)
Chester—Sickel, G. B. (L.)
Webster, G. C. (L.)
Clarion—Phillips, F. P. (C.)
Coraopolis—Aten, E. J. (L.)
Corry—Kibler, J. C. (L.)
Derry—Crouse, C. C. (C.)
Fountain Springs—Mauser, R. F. (C.)
[illegible] F. V. (L.)
[illegible] (C.)
[illegible] B. A. (C.)
Wilson, H. S. (C.)
Hershey—Zimmerman, J. L. (L.)
[illegible] W. R. (C.)
[illegible] R. D. (C.)
Jersey Shore—Goodman, L. M. *(M.)*
Johnstown—Penrod, H. H. (C.)
Scharmann, F. G. (C.)
Lancaster—Pomerantz, H. (C.)
McKeesport—Wiley, J. C. (C.)
Millsboro—Hawkins, W. J. (L.)
Monongahela—Hays, G. K. (C.)
Mount Carmel—Samuel, E. R. *(C.)*
Nanticope—Heyer, F. W. (C.)
New Brighton—*Boots*, R. H. (C.)
Norristown—Jaffe, S. (M.)

Osceola Mills—Lynn, A. C. (C.)
Philadelphia—Ashton, W. E. (L. C.)
Austin, J. P. (M.)
Bates, W. (M.)
Bethel, J. P. (C.)
Blair, M. W. (L.)
Buerki, R. C. (L.)
Carnett, J. B. (L. C.)
Carpenter, C. (C.)
Coplin, W. M. L. (L. C.)
Edwards, T. F., Jr. (C.)
Ezickson, W. J. (C.)
Flick, J. B. (C.)
Gerhard, A. H. (L.)
Hodge, E. B. (L. C.)
Jopson, J. H. (L. C.)
Kane, L. A. (C.)
Keene, F. E. (M.)
Knowles, F. C. (M.)
Krumbhaar, E. B. (M.)
McCloskey, E. W. (C.)
McConaughey, J. C. (L.)
Mitchell, C. F. (L. C.)
Murfin, J. G. (C.)
Old, H. (M.)
Outerbridge, G. W. (C.)
Owen, H. R. (C.)
Picard, H. L. (C.)
Post, J. W. (L.)
Roddy, J. A., Jr. (M.)
Speese, J. (M.)
Turner, J. (C.)
Whitaker, W. (C.)
Wilmer, H. B. (C.)
Woods, A. C. (M.)
Zulick, J. D. (M.)
Pittsburgh—Baer, H. L. (L.)
Caldwell, B. W. (Col.)
Cashman, B. Z. (C.)
Chatham, E. T. (C.)
Clark, E. P. (C.)
Cohen, M. A. (L.)
Colwell, A. H. (C.)
Cunningham, W. L. (L.)
D'Zmura, A. P. (C.)
Fredette, J. W. (C.)
Frodey, R. J. (C.)
Gold, J. B. (C.)
Jacob, F. M. (C.)
Larimore, F. C. (L.)
Long, H. M. (C.)
Maits, C. B. (C.)
Matheny, A. R. (C.)
Probst, W. J. (L.)
Rinehart, S. M. (M.)
Sieber, P. R. (M.)
Simpson, J. R. (M.)
Simpson, K. S. (C.)
Smith, S. S. (M.)
Snowden, R. R. (C.)
Zurhorst, E. W. (M.)
Pittston—Burke, J. P. (M.)
Punxsutawney—Musser, G. M. (M.)
Roaring Branch—Castlebury, G. D. (C.)
Scranton—Gibbs, H. W. (C.)
Goodman, D. A. (L.)
Otoole, J. E. (C.)
Stoneboro—Buckley, C. J. (L.)
Sugar Notch—Caffrey, J. J. (C.)
Wawa—Keating, P. M. (C.)
Wellsboro—Bodine, F. S. (C.)
Wilkes-Barre—Cressler, J. W. (C.)
Wyoming—Smith, A. B. (C.)

RHODE ISLAND

Central Falls—Bernard, W. P. (C.)
Pascoag—Daley, T. V. (C.)
Providence—Blair, F. L. (M.)
Breslin, R. H. (C.)
Gormly, C. F. (M.)
Hawkes, C. E. (C.)
Mulvey, W. A. (C.)
Riverside—Hascall, T. C. (C.)
Warren—Drowne, F. P. (C.)

SOUTH CAROLINA

Barnwell—Patterson, E. L. (C.)
Batesburg—Edwards, J. B. (C.)
Charleston—O'Driscoll, W. C. (M.)
Easley—Bolt, J. L. (C.)
Florence—Smyser, J. D. (C.)
Greenville—Parker, J. W. (C.)
Olar—Ray, C. B. (C.)
Orangeburg—Schiffley, H. T. (C.)
Sumter—Mills, W. E. (L.)
Weinberg, M. (L.)

SOUTH DAKOTA

Redfield—Sutton, D. (L.)
Vermilion—Brookman, L. J. (L.)

TENNESSEE

Johnson City—Reeves, E. W. (C.)
Knoxville—Hill, L. D., Jr. (C.)
London—Robinson, H. (L.)
Memphis—McGehee, J. L., Jr. (M.)
Murfreesboro—Murfree, M. B. (C.)
Nashville—Brown, E. E. (C.)
Bryan, O. N. (C.)
Givan, T. B. (L.)
Newport—Hampton, J. E. (C.)
Trenton—Matthews, E. C. (L.)

TEXAS

Austin—Beverly, A. F. (M.)
Watt, W. E. (C.)
Beeville—Prather, R. M. (L.)
Bronte—Chambers, W. F. (L.)
Dallas—Aiguier, R. L. (L.)
Lott, M. E. (L. C.)
McBride, R. B. (M.)
McLaurin, J. G. (C.)
Talmage, D. S. (C.)
Eden—Lockhart, J. P. (L.)
Ennis—McRea, W. T. (L.)
Fort Worth—Montgomery, J. T. (C.)
White, J. E. (C.)
Franklin—Sharp, A. J. (L.)
Galveston—Flynn, J. G. (M.)
Georgetown—Randolph, V. P. (C.)
Handley—Lorimer, W. S. (L.)
Houston—Aydam, C. W. (C.)
Bertner, E. W. (C.)
Cooke, E. F. (C.)
Kenedy—Kent, C. M. (C.)
Kingsville—Shelton, J. H. (C.)
Laneville—Galloway, A. H. (L.)
Moody—Miller, G. (L.)
San Antonio—Bonner, W. F. (C.)
Shive—Chandler, C. E. (C.)
Terrell—Standifer, C. H. (C.)
Thorndale—Lawrence, E. L. (L.)

UTAH

Salt Lake City—Allen, D. K. (C.)
Mayo, H. N. (M.)
Stevenson, T. W. (C.)

VERMONT

Montpelier—Harriman, F. W. (C.)
Underhill Center—Fogg, A. L. (L.)

VIRGINIA

Abingdon—Smith, F. H. (L.)
Ballston—Wellburn, W. C. (C.)
Boykins—Musgrave, G. H. (M.)
Bristol—Ardan, N. I. (M.)
Cambria—Ryder, O. A. (L.)
Charlottesville — Lankford, B. (M.)
Chase City—Brooks, E. B. (L.)
Colonial Beach—Brent, W. L. (C.)
Danville—Miller, E. H., Jr. (M.)
Fredericksburg—Mass, U. (L. C.)
Hopewell—Stallard, S. L. (L.)
Lynchburg—Kyle, B. H. (M.)
New Church—Critcher, C. E. (C.)
Norfolk—Hume, J. S. (L.)
Orange—Scott, F. G., Jr. (C.)
Petersburg—Trivette, W. A. (L.)
Richmond—Blanton, W. B. (C.)
Fitzgerald, J. O., Jr. (L.)
Fletcher, F. P., Jr. (L.)
Fravel, R. C. (C.)
Hodges, F. M. (M.)
McKinney, J. T. (C.)
Phillips, C. (C.)
Porter, W. B. (M.)
Whitehead, L. J. (L.)
Roanoke—Boyd, J. O. (L.)
Staunton—Martin, J. L. (L.)
Suffolk—Gay, W. T. (L.)
University—Goodwin, W. H. (L. C.)
Witt, D. H. (M.)
Woodbery, H. S. (C.)

WASHINGTON

American Lake—Dudley, H. D. (C.)
Anacortes—Shaw, A. (C.)
Bellingham—Smith, J. S. (L.)
McCleary—Fleming, B. E. (L.)
Okanogan—Dewey, L. S. (L.)
Randle—Lauman, U. M. (L.)
Seattle—Carroll, F. M. (M.)
West, P. C. (C.)
Spokane—Frost, W. S. (M.)
Hendricks, R. (M.)
Whittaker, F. J. (M.)
Tacoma—Montague, E. A. (C.)
Whitacre, H. J. (L. C.)

WEST VIRGINIA

Ben Bush—Cayce, J. S. (L.)
Charleston—Mendeloff, M. I. (L.)
Hinton—James, M. C. (M.)
Hurricane—Roberson, G. C. (C.)
White Sulphur Springs—Myles, W. E. (L.)

WISCONSIN

Chippewa Falls—Law, W. G. (C.)
Eau Claire—Derge, H. F. (L.)
Elxiland—Maercklein, A. G. (L.)
Fond du Lac—Schlesselman, G. H. (L.)
Grand Rapids—Pomainville, F. X. (M.)
Greenbush—Cary, F. (M.)
Lancaster—Fowler, J. H. (C.)
Milwaukee—Baum, E. L. (C.)
Milwaukee—Black, N. M. (L. C.)
Kampmeier, A. J. (L.)
Segal, G. M. (L.)
Yaffe, A. (L.)
Mineral Point—Ludden, H. D. (C.)
Richland Center—Breeden, R. F. (C.)
Ripon—Foat, J. S. (C.)
Sheboygan—Barrett, E. J. (M.)
Stratford—Fuller, C. O. (L.)
Wauwatosa—Cutler, J. S. (C.)

ORDERS TO OFFICERS OF THE MEDICAL CORPS, U. S. ARMY

Alabama

To Fort Crockett, Texas, from Fort Oglethorpe, Lieut. E. C. HAGLER, Northport.

Arkansas

To Camp Pike, Ark., base hospital, from Camp Jackson, Major M. D. OGDEN, Little Rock.

California

To San Francisco, Calif., Letterman General Hospital, from Camp Dix, Capt. A. L. FISHER, San Francisco; from Camp Lewis, Capt. J. CARLING, Los Angeles; from Eastview, Capt. A. F. HIGGINS, Sacramento.

Colorado

To Fort Des Moines, Iowa, from Eastview, Lieut. C. E. CONDON, Breckenridge.

District of Columbia

To Camp Sherman, Ohio, base hospital, from Camp Dix, Major C. L. HALL, Washington.

To Hoboken, N. J., from Army Medical School, Lieut.-Col. E. R. WHITMORE.

To report to the commanding general, Philippine Department, from Camp Meade, Capt. I. A. PELZMAN, Washington.

Florida

To Mineola, N. Y., Hazelhurst Field, from Arcadia, Lieut. H. T. DOUST.

Georgia

To Camp Benning, Ga., from Camp Dix, Capt. J. D. MAULDIN, New Holland.

To Camp Grant, Ill., base hospital, from Camp Sherman, Capt. W. E. MEANWELL, Columbia.

To Camp Jackson, S. C., base hospital, from Camp Greene, Lieut. H. L. JOHNSTON, Argyle.

To Camp Sherman, Ohio, base hospital, from Camp Gordon, Capt. W. E. QUILLIAN, Atlanta.

To Fort McPherson, Ga., from Camp Gordon, Major E. V. KELLER, Atlanta.

To Hoboken, N. J., Capts. A. O. MEREDITH, Hartwell; T. E. PUGH, Talbotton.

Illinois

To Camp Grant, Ill., from Camp Sherman, Lieut. R. F. DOWELL, Elgin. As tuberculosis examiner from Camp Sherman, Lieut. G. K. FENN, Chicago Heights.

To Colonia, N. J., from Camp Dix, Lieut. S. H. EASTON, Peoria.

To Detroit, Mich., from Camp Dix, Capt. B. M. CONLEY, Wilmette; from New York, Capt. T. REED, Chicago.

To Fort Sheridan, Ill., from Camp Bowie, Capt. J. F. CLARK, Chicago; from Camp Jackson, Lieuts. F. W. FIEDLER, Batchtown; P. A. STEELE, Chicago.

To New Haven, Conn., from Camp Dix, Lieut. L. W. ELSTON, Chicago.

To San Francisco, Calif., Letterman General Hospital, from Camp Sherman, Capt. C. M. McKENNA, Chicago.

The following order has been revoked: *To Camp Dix, N. J.,* from Camp Custer, Capt. E. H. PARRY, Galesburg.

Indiana

To Camp Knox, Ky., camp hospital, from Camp Abraham Eustis, Lieut. C. E. QUINN, Burlington.

To Camp Lee, Va., base hospital, from Biltmore, Lieut. J. W. THOMSON, Garrett.

To Fort Benjamin Harrison, Ind., from Camp Dodge, Capt. E. K. SCHURTZ, Waterloo; from Camp Gordon, Capt. C. S. ROSENBURY, South Bend.

To Fort Riley, from Camp Sherman, Capt. O. EVERMAN, Indianapolis.

To Washington, D. C., from Camp Dix, Lieut.-Col. H. O. BRUGGEMAN, Fort Wayne.

Kansas

To Fort D. A. Russell, Wyo., from Camp Dix, Capt. F. B. SHELDON, Manhattan.

To Fort McHenry, Md., Major L. A. CLARY, Hutchinson.

To Fort Riley, as tuberculosis examiner, from Camp Meade, Major E. H. JOHNSON, Peabody. Base hospital, from Camp Dix, Capt. W. H. CARTER, Wichita.

To Fox Hills, N. Y., from Camp Dix, Capt. J. D. COOK, Topeka.

Kentucky

To Camp Zachary Taylor, Ky., base hospital, from Camp Abraham Eustis, Lieut. H. H. RICHESON, Campbellsville; from Camp Dix, Capt. O. R. MILLER, Louisville.

To Denver, Colo., from Fort Bayard, Capt. J. R. PEABODY, Louisville.

Maryland

To Fort McHenry, Md., from Camp Jackson, Capt. J. H. TRABAND, JR., Baltimore.

To Hoboken, N. J., Capt. C. R. BROOKE, Baltimore.

To Philadelphia, Pa., from Camp Grant, Major F. W. RANKIN, Baltimore.

Massachusetts

To Boston, Mass., from Camp Dix, Lieut. R. A. ROCHFORD, Springfield; from Camp Jackson, Capt. N. A. GALLAGHER, Malden.

To Canal Zone, from Garden City, Capt. H. K. TUTTLE, Tewksbury.

To Cape May, N. J., from Walter Reed General Hospital, Lieut. G. E. DEERING, Worcester.

To Denver, Colo., from Lakewood, Lieut. A. G. C. SCHNACK, Boston.

To Detroit, Mich., from Cape May, Lieut. J. B. A. JOHNSON, Lowell.

To Fort Bayard, N. M., from Camp Dix, Capt. H. E. CARNEY, Boston.

To Fort McHenry, Md., from Camp Dix, Capt. J. H. McGUIRE, Boston.

To Fox Hills, N. Y., from Camp Dix, Capt. F. R. SIMS, Melrose.

The following order has been revoked: *To Camp Upton, N. Y.*, base hospital, from Hoboken, Lieut. L. S. KEMP, Canton.

Michigan

To Chicago, Ill., from Camp Jackson, Capt. E. SMITH, Jr., Detroit.

To Detroit, Mich., from Camp Custer, Lieut. W. H. NILES, Marshall.

To report to the commanding general, Western Department, from Fort Schuyler, Lieut. S. M. WELLS, Jr., Grand Rapids.

To Walter Reed General Hospital, D. C., from Camp Custer, Lieut.-Col. C. J. BARTLETT.

To Wichita Falls, Texas, Call Field, from San Antonio, Lieut. J. L. DESROSIER, Detroit.

Minnesota

To Camp Sherman, Ohio, from Camp Custer, Lieut. L. W. ANDERSON, Atwater.

To Fort Snelling, Minn., from Camp Dix, Lieut. H. E. HULSICK, St. Paul; from Camp Dodge, Lieut.-Col. J. C. STALEY, St. Paul.

Mississippi

To Fort Oglethorpe, from Eastview, Capt. J. T. HOSEY, Enterprise.

Missouri

To Army Medical School for instruction, from Camp Dix, Capt. D. E. MACKEY, Clayton.

To Fort Riley, base hospital, from Plattsburg Barracks, Capt. H. M. LARUE, Kansas City.

To Garden City, N. Y., from Hoboken, Lieut. H. O. LIENHARDT, North Kansas City.

To St. Louis, Mo., from Camp Dix, Lieut. H. D. HAVARD, Sedalia.

Nebraska

To Denver, Colo., from Otisville, Major W. N. ANDERSON, Omaha.

To Fort Bayard, N. M., from Camp Dix, Capt. R. WOODS, Haigler.

To Fort D. A. Russell, Wyo., from Chicago, Capt. C. L. FAHNESTOCK, McCook.

To Mineola, N. Y., Hazelhurst Field, from Fort Crook, Lieut. J. J. LANCER.

New Jersey

To Columbus Barracks, Ohio, from Hoboken, Col. C. L. WILLCOX.

To Fort Snelling, Minn., from Lakewood, Capt. R. D. SCHIMMELPFENNIG, Montclair.

To New Haven, Conn., from Camp Dix, Major R. D. WOLFE.

To Oteen, N. C., from Lakewood, Lieut. J. B. ANDERSON.

To Vancouver Barracks, Wash., from Camp Dix, Col. F. C. BAKER.

To Walter Reed General Hospital, D. C., from Hoboken, Lieut. C. D. PILLSBURY.

New York

To Army Medical School for instruction, from Walter Reed General Hospital, Lieut. D. D. KRUPP, Brooklyn.

To Camp Lee, Va., from Camp Jackson, Capt. O. H. JOHNSON, New York.

To Camp Sherman, Ohio, base hospital, from Camp Dix, Capt. W. J. TRACY, Hornell.

To Camp Zachary Taylor, Ky., from Camp Sherman, Lieut. J. C. O'NEILL, New York. *To examine the command* for cardiovascular diseases, from Lakewood, Lieut. H. C. FUHRMAN, Brooklyn.

To Carlisle, Pa., from Camp Dix, Major R. H. FOWLER, Brooklyn.

To Eastview, N. Y., from Plattsburg Barracks, Lieut. J. W. MAMBERT, Hudson.

To Fort McHenry, Md., from Camp Jackson, Major W. W. WEEKS, New York.

To Fort Sheridan, Ill., from Camp Dix, Major R. N. SEVERANCE, Staten Island; Capt. C. S. LITTLE, Thiells.

To Fort Totten, N. Y., from Camp Sherman, Capt. L. B. MOUNT, Albany.

To Fox Hills, N. Y., from Camp Jackson, Capt. E. C. FOSTER, Penn Yan; from Plattsburgh Barracks, Capt. W. G. DICKINSON, Oneonta; from Washington, D. C., Lieut.-Col. W. B. REID, Rome; from West Point, Major D. L. WINN.

To New Haven, Conn., from Camp Meade, Lieut. A. ALTSCHUL, New York.

To Newport News, Va., from Hoboken, Capt. R. F. ZIMMERMAN, Elmhurst.

To Walter Reed General Hospital, D. C., from Lakewood, Lieut. R. E. CUMMING, New York.

The following order has been revoked: *To Fort McHenry, Md.*, from Camp Dix, Lieut.-Col. J. W. JAMESON, New York.

North Carolina

To Washington, D. C., Surgeon-General's Office from Camp Jackson, Capt. R. S. CLINTON, Gastonia.

Ohio

To Camp Meade, Md., from Camp Alfred Vail, Lieut. W. H. STRATHMANN, West Toledo. As tuberculosis examiner, from Lakewood, Lieut. I. B. SMOCK, Canton.

To Camp Sherman, Ohio, base hospital, from Fort Snelling, Lieut. C. R. FISHEL, Thurston.

To Carlisle Pa., from Camp Jackson, Lieut. R. G. GROSSMAN, Cleveland.

To Fort Benjamin Harrison, from Camp Gordon, Capt. F. W. HITCHINGS, Cleveland.

To Fort Sheridan, Ill., from Camp Dix, Major A. MacIVER, Marysville.

To Hoboken, N. J., Capts. W. C. DAVIS, East Liberty; G. R. CURL, Edgerton; Capt. C. G. LYONS, National Military Home.

Oklahoma

To Camp Pike, Ark., base hospital, from Camp Dix, Lieut. J. J. CAVINESS, Altus; from Fort Oglethorpe, Capt. W. W. WOODY, Tulsa.

Pennsylvania

To Camp Abraham Eustis, Va., from Walter Reed General Hospital, Lieut. C. L. McCOY, Pittsburgh.

To Detroit, Mich., from Camp Dix, Capt. G. W. VAN GORDER, Pittsburgh.

To Fort McHenry, Md., from Camp Jackson, Capt. S. R. SKILLERN, Jr., Philadelphia.

To Fort McPherson, Ga., from Camp Gordon, Capt. G. P. ARD, Woodward.

To Hoboken, N. J., Major M. C. BURNS, Philadelphia; Capts. E. A. MILLER, East Berlin; W. VAN DOLSEN, Philadelphia.

To Pittsburgh, Pa., from Camp Dix, Lieut. J. H. SEIPEL, Pittsburgh.

To Walter Reed General Hospital, D. C., from Lakewood, Capt. J. H. GALBRAITH, Altoona.

The following orders have been revoked: *To Camp Dix, N. J.*, from Camp Lee, Lieut. J. G. LOGUE, Williamsport. *To Detroit, Mich.*, from Camp Dix, Lieut. F. P. McCARTHY, Erie. *To Fort McHenry, Md.*, from Surgeon-General's Office, Lieut.-Col. E. L. ELIASON, Philadelphia.

Rhode Island

To Walter Reed General Hospital, D. C., from Camp Dix, Major W. McDONALD, Jr., Providence.

Tennessee

To Camp Zachary Taylor, Ky., base hospital, from Camp Dix, Capt. C. M. GRIFFITH, Tullahoma.

To Fort McPherson, Ga., from Camp Upton, Lieut. C. E. WARDE, Memphis.

Texas

To Fort Bayard, N. M., from Fort Crockett, Lieut. W. L. PARKER, Temple.

To Fort Sam Houston, Texas, base hospital, from Camp Grant, Lieut. F. O. CALAWAY, Austin.

To Marfa, Texas, camp hospital, from Camp Dix, Lieut. D. SPANGLER, Sherman.

Virginia

To Camp Meade, Md., base hospital, from Fort Oglethorpe, Major J. C. MOTLEY, Abingdon.

To Fort McHenry, Md., from Walter Reed General Hospital, Capt. E. B. DOVELL, Uno.

To Hoboken, N. J., Capt. R. L. OZLIN, Dundas.

ORDERS TO OFFICERS OF THE UNITED STATES PUBLIC HEALTH SERVICE

Asst. Surg.-Gen. H. R. CARTER, proceed to the Bureau for conference regarding future plans for malaria work.

Asst. Surg.-Gen. C. C. PIERCE, proceed to Baltimore, Md., for conference relative to venereal disease control measures. Proceed to New York, N. Y., to present an address on the Public Health Service program for venereal disease control.

Surg. L. D. FRICKS, proceed to the Bureau to attend conference regarding future plans for malaria work.

Surg. CARROLL FOX, proceed to Boston, Mass., to attend a meeting of a committee of the American Public Health Association to formulate general standards of health legislation.

Surg. JOSEPH GOLDBERGER, attend the meeting of the American Medical Association at Atlantic City, N. J., June 9-13.

Surg. G. W. McCOY, attend the meeting of the American Medical Association at Atlantic City, N. J., June 9-13.

Surg. H. M. MANNING, relieved at the Charleston, S. C., quarantine station. Proceed to the marine hospital, Memphis, Tenn., and assume charge.

Surg. H. M. BRACKEN (Reserve), detailed as supervisor of district No. 10 for the organization and administration of certain agencies for the care of War Risk patients, headquarters at St. Paul, Minn.

Passed Asst. Surg. A. R. SWEENEY, proceed to Washington, D. C., for conference relative to rural sanitation in Cumberland County, N. C.

Passed Asst. Surg. C. V. AKIN, attend Southern Sociological Conference at Knoxville, Tenn, May 12-14.

Passed Asst. Surg. C. H. WARING, detailed as supervisor of district No. 6 for the organization and administration of certain agencies for the care of War Risk patients, headquarters at New Orleans, La.

Asst. Surg. J. K. FULLER, relieved at Newport News, Va., proceed to Washington, D. C., for duty in the division of marine hospitals and relief.

Consulting San. CHARLES BOLDUAN, proceed to Atlantic City, N. J., on or about May 6, 1919, for duty in connection with the exhibit at the meeting of the American Medical Association.

Acting Asst. Surg. J. J. DURRETT, proceed to Charlottesville, Va., when necessary to advise the city health authorities regarding scavenger and sewage system.

Acting Asst. Surg. R. A. JEWETT, proceed to Atlantic City, N. J., for duty in installation of Public Health Service exhibit at the meeting of the American Medical Association.

Acting Asst. Surg. G. C. JONES, proceed to Greenville, S. C., for duty in the Public Health Service Hospital.

Acting Asst. Surg. J. C. TRAVERS, proceed to Greenville, S. C., for duty in the Public Health Service Hospital.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ILLINOIS

Unlicensed Practitioner Guilty.—Mr. Peter Cartsoles of 520 North Green Street, Chicago, was arrested by the Department of Registration and Education of the State of Illinois for practicing medicine without a license. The court found him guilty and paroled him for one year to a probation officer in Chicago.

Personal.—Dr. Charles A. Eames, assistant chief surgeon of the National Soldiers' Home, Danville, for seven years, has been transferred to the central branch hospital of the National Soldiers' Home, Dayton, Ohio.——Robert L. Morris, Major, M. C., Illinois N. G., Decatur, has been placed in charge of the Medical Corps organized at Danville.

The First Blind Massage Class in America.—The Chicago Lighthouse, an Illinois organization for helping the blind, in 1918 instituted for these unfortunates a class in massage, which has recently been graduated. The class was composed of six men and two women, carefully selected from a large group of blind people by Mr. Peter Peel and Dr. Jacob W. Bolotin, Chicago, the blind heart and lung specialist. The training consisted of an eleven month course conducted according to the system used at St. Dunstan's Hostel for the Blind of England, where massage was successfully taught to blinded soldiers as early as 1915. The founder of this institution, Sir Arthur Pearson of London, sent for the use of the American class, fifteen books in revised British Braille. These books are a compilation of the technical knowledge obtained from a digest of the most scientific works written on the subject by such authors as Ashby, Cunning, Halleburton, Hudson, Palmer, Kurre W. Ostrom, G. F. Stout and Dr. Justina Wilson. The students were instructed in anatomy by Dr. Bolotin and received their technical training from Mr. Peel. They were found to be very adaptable to the work and became most efficient masseurs. Mr. Peel plans to take two of the graduates at a time into his office to serve an internship of a few months, during which time they receive a remuneration of from $20 to $25 a week. He requests Chicago physicians to cooperate with him in this worthy undertaking by sending patients to these masseurs, especially poor patients who cannot afford to pay for the services rendered, so that the masseurs may have an opportunity of receiving more practical experience. Further information may be obtained by communicating with Mr. Peel at 20 West Jackson Boulevard; telephone, Harrison 8128.

Chicago

Course in Dietitics.—The Bureau of Dietitian Service of the American Red Cross has arranged through the Chicago Chapter Teaching Center to hold a course in dietetics at hospital training schools for nurses. Any school which has not already a visiting dietitian will be assisted by the Red Cross on application to Mrs. L. P. Mehlig, Dietetics Department, Chicago Chapter Teaching Center, American Red Cross.

Personal.—Dr. Boleslaus Klarkowski has been appointed a member of the board of education for four years.——Dr. Haim I. Davis, Major, American Red Cross, has returned after two months' study of the situation in Poland and Galicia.——Dr. Frank J. Norton has gone overseas for duty with the Y. M. C. A.——Major Samuel J. Walker, American Red Cross, who headed a relief commission into Bulgaria, has returned to his work in Macedonia.——Judge Joseph B. David, in the superior court, May 17, set aside the verdict of $6,500, returned by a jury the previous day against Dr. Daniel A. K. Steele, in a damage suit for $50,000 brought by Miss Dell D. Nichols, who claimed because of an operation performed by Dr. Steele she lost her voice. Judge David held that there was nothing in the evidence which would indicate that the operation was the cause of the plaintiff's misfortune. ——Dr. Haldane Cleminson, charged with the murder of his wife in 1909, and imprisoned in the state penitentiary in Joliet, since 1911, has been recommended to Governor Lowden for discharge from prison.

IOWA

Homeopathic College Discontinued.—It is reported that at the last meeting of the Iowa legislature the College of Homeopathic Medicine of the State University of Iowa was discontinued and an elective chair in homeopathic materia medica and therapeutics was incorporated in the state college of medicine. This chair is to be occupied by Dr. George Royal, Des Moines, former dean of the College of Homeopathic Medicine.

New State Officers.—At the sixty-eighth annual meeting of the Iowa State Medical Society, held in Des Moines, May 7 to 9, under the presidency of Dr. Max E. Witte, Clarinda, the following officers were elected: president, Dr. William L. Allen, Davenport; president-elect, Dr. Donald Macrae, Jr., Council Bluffs; vice presidents, Drs. George C. Stockman, Mason City, and Granville N. Ryan, Des Moines. About 700 members were in attendance at this meeting, and Des Moines was selected as the next place of meeting.

Personal.—Dr. Walter L. Bierring, Des Moines, a member of the National Board of Medical Examiners, has secured passports and will leave next month on a mission to England, France and Italy. The board of which he is a member has been appointed to consult with national examining boards of other countries looking toward the securing of a uniformity of examinations, which will permit the issuance of world certificates.——Dr. Benjamin Thompson, Tama, on May 14, celebrated the fiftieth anniversary of his entrance into the practice of medicine in Tama County.——Dr. James F. Battim has succeeded Dr. Alpheus B. Conaway, as city physician of Marshalltown.——Dr. Loren K. Meredith, Des Moines, has been appointed by the state board of health to superintend the carrying out of the new venereal disease act, which was recently passed by the general assembly.——Pearl Spanswick, Des Moines, has been appointed state bacteriologist. ——David S. Fairchild, Col., M. C., U. S. Army, Clinton, chief surgeon of the Rainbow Division, has returned from abroad.

KANSAS

County Society Organized.—Physicians of Osborne County met at Osborne, May 2, reorganized the Osborne County Medical Society and elected the following officers: president, Dr. James E. Henshall; vice president, Dr. Benjamin F. Chilcott, and secretary-treasurer, Dr. Samuel J. Schwaup, all of Osborne.

State Society Meeting.—The fifty-third annual meeting of the Kansas Medical Society was held in Ottawa, May 7 and 8, under the presidency of Dr. William S. Lindsay, Topeka. It was announced by the president that 651 physicians of Kansas, or nearly one half of the practitioners of the state, have been in the service of the United States in some capacity during the war. Dr. Elmer E. Liggett, Oswego, was elected president, and Hutchinson was selected as the place of meeting for 1920.

MARYLAND

Personal.—Dr. Clement A. Penrose, who has been seriously ill for the past eight weeks at his home in Baltimore, has been removed to the Church Home and Infirmary, where he has undergone a severe operation and is reported as doing well.——Albert G. Singewald, Major, M. C., U. S. Army, Baltimore, who served overseas, has returned and entered U. S. Army General Hospital No. 2, at Fort McHenry, for treatment.

Hospital for Tuberculous Negro.—Plans for a sanatorium for the tuberculous negro, which was authorized by the last legislature, are being developed now by the board of directors of the Maryland State Sanatorium. The legislature appropriated a total of $75,000 to start the work, $50,000 in this fiscal year and $25,000 in the next. The members of the board assume that the state will be reasonable in making future appropriations and expect to have considerably more money to put into the construction of the institution. There is the most vital need for an adequate institution that will care for the tuberculous negro. It is said to be practically settled that the hospital will be located near Baltimore. In this location, the institution can get its water, light and sewage facilities from the city, and thus avoid the expense of building its own plants. A hospital for at least 100 beds at the outset is under consideration.

MASSACHUSETTS

New Hospital.—The new Norfolk County tuberculosis hospital at Braintree Highlands, recently established at a cost of $365,000, has been formally dedicated. The hospital has a total capacity of seventy-five patients although twenty-five additional patients can be installed without overcrowding.

Personal.—Joel E. Goldthwait, Col., M. C., U. S. Army, Boston, who commanded the reconstruction hospital in France under the direction of the Massachusetts General Hospital Unit, has returned to the United States.——Dr. Charles W. Bartlett, Marshfield, has been reappointed medical examiner (coroner) of the Fifth Plymouth District.——Dr. William J. Gallivan, Boston, has been reappointed a member of the health council.——Dr. George L. West, Newton, has been reappointed medical examiner (coroner), and Dr. T. Morton Gallagher, associate medical examiner, for the Seventh Essex District.——Dr. Dudley A. Sargent, Cambridge, widely known expert on physical education, for forty years, director of the Hemingway Gymnasium of Harvard University, has resigned, but will continue to direct the Normal School of Physical Education.——Dr. Seth L. Strong, Marshfield Hills, who has been teaching surgery for several years in the Royal Medical College at Bangkok, Siam, has returned to the United States on account of ill health.——Dr. Bernard W. Carey, Winthrop, epidemiologist of the state department of health, has been appointed director of the division of communicable disease, succeeding Dr. John S. Hitchcock, Northampton, resigned.——Dr. George H. Bigelow, Boston, recently returned after service in the epidemiologic department of the Army in France, has been appointed temporary epidemiologist of the state board of health, succeeding Dr. Carey.

MISSISSIPPI

Mississippi Registration Area.—Official notification has been received by the state board of health that the bureau of vital statistics of the board has been admitted into the federal registration area for deaths, having successfully passed the test requiring 90 per cent. registration.

Personal.—David W. Walley, Major, M. C., U. S. Army, Richton, on duty with the Thirteenth Division, has been promoted to the rank of lieutenant-colonel, and has returned to the United States.——Dr. Robert N. S. Young, Brooklyn, has been appointed all-time health officer for Hattiesburg and Forrest County.——Dr. Walter W. Crawford, Lieut.-Col., M. C., U. S. Army, Hattiesburg, who has been on duty with the American Expeditionary Forces in France for several months, has returned home.

New State Officers.—The annual meeting of the Mississippi State Medical Association was held in Hattiesburg, May 13 and 14, under the presidency of Dr. Walter S. Leathers, dean of the department of medicine of the University of Mississippi. Jackson was selected as the place of meeting for 1920, and the following officers were elected: president, Dr. Felix J. Underwood, Aberdeen; secretary, Dr. Thomas M. Dye, Clarkesdale; treasurer, Dr. James M. Buchanan, Meridian, and members of the state board, Drs. Walter S. Leathers, University; Charles D. Mitchell, Jackson; Thomas F. Elkin, Tupelo; Benjamin L. Crawford, Tylertown, and Harry F. Garrison, Hattiesburg.

MISSOURI

Retroactive Bill Defeated.—A bill was introduced into the Missouri legislature amending the medical practice act so as to require the state board of health to admit to its examinations graduates of a "legally chartered" instead of a "reputable" medical school. The bill was defeated.

Health Conference.—The Springfield chamber of commerce, cooperating with the Missouri Tuberculosis Association, will hold a health-education conference at Springfield, May 29 to June 1. The object of the campaign is to secure instruction in the principles of personal hygiene and household sanitation to all schoolchildren in the state, and in municipal and industrial hygiene and sanitation to students in higher institutions of learning; to ascertain through a scientifically conducted health survey of schools and schoolchildren, especially in rural districts, facts pertaining to the status of the health of schoolchildren and of sanitary conditions under which they live; to determine a feasible plan whereby the health and mental efficiency of schoolchildren may be promoted; and to promote through systematic physical training and playground activities the normal instinct to play, whereby the schoolchild may be assured a sound and enduring body to house a well-trained mind. These objects are to be secured by the detail of one of the five normal schools of the state of a qualified agent as instructor in rural school and household hygiene and sanitation, who will also give like services to students in teacher training course in high, village and rural schools; by the employment of a competent woman to direct state-wide work in the modern health crusade; by the detail, for state-wide service in the universities and colleges of the state, of a man specially qualified in the principles and practice of industrial and municipal hygiene and sanitation; by the employment of a highly trained and experienced director of health surveys, of a state director of school nursing, and of state and district directors of physical training and playground activities.

NEW JERSEY

Eugenic Law Passed.—Under a bill passed by the legislature of New Jersey, a physician's certificate of health has been made a prerequisite to matrimony in the state. The purpose is to prevent any persons from marrying who are afflicted with contagious or social diseases. The bill also provides that a fee for a physician making the necessary examination shall not exceed $2.50, and that county physicians, if called on, shall make this examination without charge to indigent applicants.

Reconstruction of the Industrially Disabled.—A commission has recently been created by act of the New Jersey legislature which has for its purpose the application to the cripples of civil life of those principles for the reconstruction of the disabled in civil and industrial life that have been worked out so successfully under military organization. Governor Edge and the members recently visited United States General Hospital No. 3, Colonia, N. J., to study the work being done there under Major Fred H. Albee, chief of the surgical division of that hospital. Governor Edge has appointed Major Albee chairman of the rehabilitation commission.

NEW YORK

New York City

Opposition to Health Insurance.—At a meeting of the Harlem chamber of commerce and the physicians' league, held on May 8, resolutions were passed endorsing the action of the Medical Society of the State of New York in instructing its delegates to oppose compulsory health insurance at the approaching annual session of the American Medical Association.

Hotel Opens Hospital.—The management of the new Hotel Pennsylvania has opened a hospital fully equipped, with operating room and roentgen-ray apparatus for the use of its more than 2,000 employees. The hotel has conducted a clinic for several months and has treated an average of sixty patients daily. The hospital will be in charge of Dr. Joseph Darwin Nagel, assisted by a staff of visiting physicians and surgeons and a corps of trained nurses. A visiting nurse will also be employed to look after the home conditions of patients.

Personal.—Dr. St. Clair Smith is to be the guest of honor at a dinner to be given at the Hotel Astor in celebration of his fifty years in the practice of medicine in this city.——Dr. Francis M. McMahon, attached to the staff of the Knickerbocker Hospital, was thrown to the pavement recently and sustained severe contusions and internal injuries, when the ambulance in which he was responding to a sick call collided with an automobile truck.——Royale H. Fowler, Brooklyn, Major, M. C., U. S. Army, who recently returned after service with Base Hospital No. 6, at Beaune, France, has been assigned to duty with General Hospital No. 21, Fox Hills, N. Y.

Charities Conference.—The tenth annual meeting of the New York City Conference of Charities was held, May 13 14 and 15, under the presidency of Dr. Franklin Chase Hoyt The questions discussed related to public health, war labo problems and public charities. Health Commissioner Copeland spoke of public health problems; Justice Cornelius F Collins discussed the problem "After the Saloon, What?" Dr. Pearce Bailey spoke on "The Problem of the Feebleminded in New York." Justice Collins expressed the opinio that an increase in indulgence in habit-forming drugs i almost certain to follow after prohibition and that legislation should be such as to permit medical judgment to prescribe alcohol. Dr. Walter H. Conley spoke on "The Unification and Control of Public Hospitals." He believes that an ideal control of public hospitals could be obtained by establishing a department of hospitals under the jurisdiction and direction of a commissioner, instead of the present system, which leaves the hospitals under three distinct departments of the state government. Charles H. Johnson, secretary of the state board of charities, spoke on "Cooperation and Relation of Public and Private Agencies."

PENNSYLVANIA

Philadelphia

Personal.—Samuel Calvin Smith, Major, M. C., U. S. Army, formerly an instructor in the Jefferson Medical College, arrived from France, May 3. While overseas, he was stationed at a group of evacuation hospitals in the advance area of Bazoilles-Sur-Mese, later was transferred to Marseilles, where he was appointed chief of the medical service. ——Dr. Florence Chapman Child has returned from France, where she spent eighteen months with the division of child hygiene of the American Red Cross.——Drs. Alice Weld Tallant and Maude Kelly, formerly of the staff of the Women's Medical College, have been awarded the croix de guerre and Service de Sante decorations. They are the only American women given the ranks of major in the French army. Dr. Tallant went overseas as a director of the Smith College relief unit.

Postgraduate Course in Social Service Work.—With the cooperation of the Visiting Nurses' Society, the Pennsylvania School for Social Service opened a postgraduate course in public health nursing. The four month course for those wanting immediate preparation will be followed by a nine month course beginning September 16. The shorter course is designed to give practical training, experience in the fundamentals of public health nursing with special emphasis on the social and educational aspects. Two months are spent with the Visiting Nurses' Society under careful supervision work, including general visiting, prenatal and postnatal care of babies. One month will be spent by each student in special work under the direction of a district secretary of the Philadelphia Society for Organizing Charity. There will be a period spent in infant welfare work, including practice in health centers, follow-up work in homes, and study of the tuberculous in the tuberculosis clinics.

CANADA

Laval University Granted Separation.—Laval University, Montreal, has been granted, by special decree of the Pope, separation from Laval University, Quebec City. Hereafter it will be known as the University of Montreal.

Personal.—Dr. Arthur Vallée, Quebec City, has been appointed a consultant by the University of Toronto, to the board of the Connaught Antitoxin Laboratory, succeeding the late Dr. Emmanuel P. Lachapelle, Montreal.

Oxford Medical Association.—The Oxford County (Ont.) Medical Association has elected the following officers: president, Dr. Jethro W. Counter, Ingersoll; vice president, Dr. Weston Krupp, Woodstock, and secretary-treasurer, Dr. George M. Brodie, Woodstock.

Gift to University of Toronto.—The department of medicine of the University of Toronto is to be the recipient of a gift of $25,000 a year for a period of twenty-five years from Sir John and Lady Eaton. This is to provide for a full-time clinician in the department of medicine and a half-time clinician in pediatrics.

Hospital at Alberta.—Arrangements have been completed for the building of a tuberculosis sanatorium at Bowness Park, Calgary, Alta. The building is to be a joint federal and provincial one, with 100 beds for soldiers and seventy-five beds for civilians. The total cost is $524,079, of which the province pays $217,000. After five years the hospital becomes the property of the province.

Queen's Endowment.—The $1,000,000 endowment fund for Queen's University now lacks only $12,000 of being completed. The late Chancellor Douglas, New York, willed $500,000 to the university on condition a like sum was raised from other sources. Some months ago the Carnegie Foundation offered $250,000 on the understanding that the remaining $750,000 be secured by May 15, but the Foundation has had the time limit extended to end of May.

Postgraduate Courses for Medical Officers.—The medical faculties of McGill and Toronto universities, according to report, have resolved to give summer postgraduate courses, especially adapted to meet the needs of returning medical officers. These courses are planned to begin about the middle of June and to extend over a period of three months. Only a nominal fee, to cover the cost of material, will be charged and the services of the teachers will be gratuitous.

LATIN AMERICA

Hookworm Disease in Cuba.—According to a report recently published by Dr. J. F. De Pazos of Havana, there is urgent need of a campaign against hookworm disease in that island, as previous foci have increased and new ones have appeared. Laboratory examinations made in previous years show that the disease prevails in various parts of the island, and especially in three towns, namely, Viñales, Los Palacios and Cabaiguán. According to him, malaria is again becoming a serious problem on the island, especially in the western part, and the statistics relative to typhoid show a greater degree of infection than that existing in Europe and the United States. A league against malaria, hookworm disease and rural typhoid was organized in Cuba in 1917.

Sanitation Work in Uruguay.—The Uruguayan government has been authorized to execute sanitation work, consisting of water and sewerage services or water only, in fifteen cities. The work will be contracted for by cities or groups of cities by public bidding to which national and foreign concerns will be admitted. The work will be paid for by an issue of sanitation bonds bearing 6 per cent. interest and 1 per cent. annual accumulative amortization. The use of drinking water at the rate of 100 liters (26.4 gallons) per day will be compulsory for every house and lot, whether inhabited or not, where canalization passes. The rate for supplying drinking water to the public shall not exceed 15.51 cents per 1,000 liters. It is estimated that the total cost for these fifteen cities will be $12,000,000. In addition to this sum, $4,000,000 will be spent for sewer construction in four districts of Montevideo.

Influenza in Brazil.—As elsewhere, the pandemic of influenza, when it reached Brazil, found the public health authorities entirely unprepared to cope with it. The blame for having permitted the entrance of the disease was placed on Dr. Carlos Seidl, who had been the director of public health from Jan. 15, 1912, until Oct. 17, 1918, when his resignation was requested by the secretary of the interior, because of the criticisms made of Dr. Seidl's apparent inability to prevent first the introduction of the disease and later its spread. In the *Revista Medico-Cirurgica do Brazil* for October, November and December, Dr. Seidl defends his administration of public health affairs and shows that he did all he could with the limited resources at his disposal. In the December number, he reviews his whole term of office and describes the work accomplished by him when he took the position left vacant by Dr. Oswaldo Cruz, the leader in the campaign against yellow fever in Brazil. In concluding, Dr. Seidl quotes the following words, which explain the difficulties he encountered and state the reason he failed to accomplish more:

> It has been shown that sanitary conditions in Brazil depend exclusively on the appropriation of the necessary funds by the government. All the endemic and epidemic diseases are known, and if funds are available there is no doubt as to the success of a prophylactic campaign against them.

GENERAL

Applicants for National Board Certificate.—Sixty-five applicants have been duly qualified to take the National Board examination to be held, June 2-7, 1919, at Philadelphia.

Library Association to Meet.—The twenty-first annual meeting of the American Medical Library Association will be held at Atlantic City, June 9, at 3 p. m., under the presidency of Dr. William Browning, Brooklyn.

Physician's Prescription Required for Venereal Disease Remedies.—According to the *Social Hygiene Monthly*, more than 23,000 druggists of this country have pledged themselves not to sell remedies for venereal diseases over the counter without a physician's prescription.

Antivenereal Disease Campaign in Cuba.—On request of the commander in chief of the Atlantic fleet, a field representative of the social hygiene division of the commission accompanied the fleet to Guantanamo Bay, Cuba, to introduce the program of educational work on venereal diseases.

Hygiene Monthly Discontinued.—With the April, 1919, issue, the *Social Hygiene Monthly* came to an end. Information on the progress of the campaign will be continued especially in the publications of the American Social Hygiene Association and through *Public Health Reports*, the official organ of the U. S. Public Health Service.

Chemical Industries Exposition.—The annual exposition of chemical industries has been changed from its usual place of meeting, New York City, and will be held this year at Chicago in the Coliseum and First Regiment Armory, during the week of September 22. The exposition will be a demonstration in itself of the ability of the United States to maintain chemical independence. Besides the exhibits, the Chicago section of the American Chemical Society is planning a scientific program for the visiting chemists.

National Examining Board Visits Europe.—A committee of the National Board of Medical Examiners, appointed by the chairman, Surg.-Gen. W. C. Braisted, U. S. Navy, consisting of Louis A. La Garde and Victor C. Vaughan, Colonels, M. C., U. S. Army, and Dr. Walter L. Bierring, Des Moines, Iowa, will sail for Europe immediately after the meeting of the American Medical Association at Atlantic City, N. J., to confer with the conjoint board of England, Ecole de Médecine, and Examining Board of France, for the purpose of gaining international recognition for American medicine, on the basis of the certificate of the national board. The committee will remain abroad two months.

Edith Cavell Hospital.—Col. Antoine Depage, professor of surgery at the University of Brussels, and head of the Belgian Red Cross, has arrived in this country and will attend the meeting of the A. M. A. His object is to thank people who contributed to the Belgian relief fund in response to appeals made by his wife, who lost her life on the Lusitania while returning from this mission. Colonel Depage has also announced his plans for building a memorial hospital at Brussels to bear the name of Edith Cavell, who for eight years prior to the outbreak of the war was matron of Colonel Depage's private clinic in Brussels, and of his wife Marie. Lloyd George has already started a fund in England which will defray half the expense of this institution. Colonel Depage hopes to raise the remainder in the United States.

Victory Number of Michigan State Journal.—The May issue of the *Journal of the Michigan State Medical Society* is a "Victory" number. It contains 314 pages and is bound in a very well designed and well executed cover printed in colors. The contents consists of the call and program for the annual meeting of the state society, together with other information regarding the place of meeting, etc., which is likely to prove of interest to the membership, and a complete "Roll of Honor" of those members who were in the government services during the war. Photographs of several hundreds of these doctors are published, together with photographs of the society's officers, groups of nurses who have been in service, various hospitals of the state and other matter bearing on the war activities of Michigan.

Red Cross Recreation Program.—The Red Cross is devising an organized recreational program for the men in the government hospitals throughout the United States. As the government has provided the best surgical skill and medical care for the physical welfare of the soldier and sailor, so the Red Cross is offering to him the most intelligent guidance for his leisure. Dr. Albert K. Fretwell, head of the Department of Recreational Leadership of Teachers' College, Columbia University, has made a tour of the reconstruction hospitals, traveling under the joint direction of the Surgeon-General's Office and the bureau of camp service, department of military relief of the Red Cross. The Red Cross has arranged for every variety of sport in which the convalescent men can participate and acts in cooperation with the department of physiotherapy in order that each man, according to his therapeutic needs, may be given the opportunity for the best physical training.

Bequests and Donations.—The following bequests and donations have recently been announced:

United Charities of Chicago, $10,000; Chicago Orphan Asylum, $8,000; Women's, Wesley, and Presbyterian hospitals each $5,000, by the will of Henry Botsford, Chicago.

Lynn, Mass., Hospital, $10,000 by the will of Walter H. Breed, Lynn.

Natchez, Miss., Hospital, a donation of $15,000 by Mrs. J. M. Carpenter, Natchez.

Presbyterian Hospital, Philadelphia, for the maintenance of a free bed, American Oncologic Hospital, Philadelphia, for the study and treatment of cancer, and Philadelphia Home for Incurables, each $5,000, and Rush Hospital for Consumptives and Free Hospital for Consumptives, Philadelphia, $2,500, by the will of Mary E. Stewart, Philadelphia.

College of Physicians of Philadelphia, a portrait of Michael Leib, one of the founders; Children's Hospital of Philadelphia, $4,000; Philadelphia Home for Incurables and Maternity Hospital, each $5,000; and contributors of Pennsylvania Hospital, $10,000, by the will of Thomas Shelton Harrison.

A New Medical Publication.—The first issue of *Modern Medicine*, a publication to be devoted to "the application of medicine and allied sciences to industrial efficiency and national health," has just appeared. It includes the *Interstate Medical Journal*. It is under the editorship of Drs. Alexander Lambert and S. S. Goldwater and under the managing editorship of Mr. John A. Lapp, who was formerly executive secretary of the health insurance commission of Ohio. The magazine aims to be a clearing house for progress in social medicine. It is well departmentized. Editorials appear under "Notes and Comments"; some excellent original articles under the heading "General Articles;" original papers on industrial medicine under "Medicine and Industry;" and under "The Nation's Health" appear such articles as "Good Roads and Health," "The New Public Health," "Schools Want Uniform Health Courses," "Capitalizing Health Knowledge." The other departments are: "Current Problems and Social Medicine," "The Month in Medicine," abstracts and book reviews. News items appear in the form of fillers. This magazine is well and artistically printed, following in its general plan *Modern Hospital*, issued by the same publisher. If succeeding numbers measure up to the initial one, this journal should be a valuable addition to American medicine.

Sir Arthur Newsholme Becomes Professor of Hygiene in Johns Hopkins School of Public Health.—Sir Arthur Newsholme, K.C.B., who has come to the United States following the closing of the international Red Cross conference at Cannes, France, in which he took a prominent part, has accepted the chair of hygiene in the new School of Public Health of the Johns Hopkins Medical School. The appointment, we understand, is tentatively for the coming year only. Since early in May Sir Arthur Newsholme had been taking part in child welfare conferences as the guest of the Children's Bureau of the Department of Labor. Sir Arthur was, until late in 1918, chairman of the Local Government Board of Great Britain, being succeeded temporarily by Mr. Hayes Fisher and more recently by Sir Auckland Geddes. Dr. Newsholme received the degree of M.D. from the University School of Medicine in 1880, the certificate in public health in 1885, and the F.R.C.P., London, in 1898. For many years he has been associate editor of the *Journal of Hygiene*, an examiner in state medicine in the University of London and an examiner in preventive medicine in the University of Oxford. He delivered the Milroy lecture of the Royal College of Physicians in 1895, his subject being "Natural History and Affinities of Rheumatic Fever." Some of his more important recent publications have concerned "Influenza from the Public Health Standpoint," "Child Mortality," "Tuberculosis and War Conditions," "The Use of Colonies in the Treatment of the Tuberculous" and many other subjects of interest to preventive medicine.

FOREIGN

Influenza in India.—Dispatches from London state that almost 5,000,000 persons have died in British India from influenza, and that fully 1,000,000 persons are believed to have died in the native states from the same cause. The deaths from influenza are estimated at 20.6 per thousand.

Warned Against Typhus Spreaders.—All over Germany notices are being posted warning the population against lice as bearers of typhus and other diseases. The increase in typhus fever is said to be due to the failure of the authorities to delouse the German soldiers returning from Russia.

Vaccination in Spain.—The success obtained with the vaccination measures enforced in the province of Madrid has induced the government to order the governors of all the provinces to institute immediately a vaccination campaign similar to the one conducted in Madrid, which was reported at length in THE JOURNAL for April 12, p. 1091.

Influenza in Spain.—In view of the reappearance of influenza, this being the third wave of the disease, the government has ordered the provincial inspectors to keep track of the disease and to report immediately those communities where the local physicians cannot cope with existing conditions, so that physicians may be ordered for service there from other places.

American Students at the University of Bordeaux.—The *Journal de Médecine de Bordeaux* relates that there are sixty medical students among the 300 American soldier-students now enrolled at the University of Bordeaux. Professor Armstrong is in charge of the American contingent—*nos jeunes amis au costume kaki*, as the journal calls them—and the American contingent already has its special weekly. Its title is *Voilà*, while the 1,200 American students enrolled at Toulouse have a weekly entitled *Qu'est-ce que c'est?* Our exchange relates that the students at Bordeaux represent forty-four states, besides one each from Nicaragua and Canada. Harvard leads in the number of its alumni, with 14; Chicago next with 9, Yale with 7.

Belgian Physicians Who Have Died During the War.—The *Paris Médical* gives a list of the members of the profession in Belgium that have not survived the war. Among them are Drs. Dubois-Havenith, father and son; Dr. Camus, burgomaster of Andenne, shot by the Germans; Prof. Van Gehuchten and Prof. de Winiwarter, both of international fame; Dr. Masoin, secretary of the Belgian Académie de médecine; Drs. Heynen, Boulengier and Van Dam, former presidents of the Féderation médicale; Dr. Rommelaere, professor emeritus of the University of Brussels; the surgeon, Van Engelen; Dr. G. Corin, professor of legal medicine at Liége, and nineteen other physicians. Dr. Dubois-Havenith presided at the International Preventive Congress held at Brussels some years ago.

Deaths in the Profession Abroad.—Dr. **R. Fusari**, professor of anatomy at the University of Turin and formerly incumbent of the chair of histology at Messina, aged 62. His works on histologic and embryologic topics won several prizes offered by scientific societies at home and abroad, and his set of anatomic models are said to be superior to anything in that line in other countries.——Dr. **C. Flensburg**, president at one time of the Swedish Medical Association, a leading internist of Stockholm, aged 63. His work, "Why Malaria Has Disappeared from Sweden" attracted much attention, as also his historical study of the sanitary statistics of the Stockholm garrison. He has also published numerous communications on pediatrics and internal medicine in general.——The *Nederlandsch Tijdschrift* mentions the death of Prof. **H. Aronson** of Berlin, pediatrist and serologist, aged 53.

LONDON LETTER

LONDON, April 30, 1919.

Euthanasia

The question as to whether physicians should have the power to terminate painlessly lives which have become a burden from incurable disease has been debated from time to time. It has arisen once more. An inquest was held in London on a man who stabbed himself in the heart. He had said that it was a pity physicians could not put patients like himself suffering from an incurable disease out of their misery. The coroner, Mr. Ingleby Oddie, remarked that we had not yet come to the stage of civilization which allowed this course, but he had no doubt that the time would come when painless euthanasia would be permitted in such cases. A verdict of "suicide while of unsound mind" was returned. Some days later an inquest was held on a man who suffered from consumption and shot himself through the heart. He had been very depressed because he was incurable and had read and called attention to an article in the daily *Mail* on the previous inquest, which was entitled, "Doctors' Right to Kill." A discussion of the question followed in the press. The medical profession showed itself almost unanimous in opposing the coroner's suggestion. A well-known physician and member of Parliament, Lieutenant-Colonel Raw, said that no physician would accept such a responsibility, for medical science was not an exact science. New discoveries were constantly being made, and a patient that was regarded as incurable today might be cured tomorrow. It was a physician's whole business to prolong life to the last, and to save the sufferer, as far as possible, from physical and mental pain. Once an alteration was made in that conception of a physician's duty, the whole public confidence in the medical profession would go. Again, to illustrate the impossibility of the proposal, suppose it was admitted that incurables might be killed, when would they be killed? A man with a disease might be as incurable in the early stages as he was in the later. He might be able to live for several years. Was he to be killed at first, or in the terminal stages of the disease? Lieutenant-Colonel Raw said that he had known many a case of men who were condemned to death by leading specialists and who had completely recovered. He considered that the proposal was utterly impossible. Capt. W. E. Elliot, another physician and member of Parliament, was equally emphatic. He instanced the cases of men suffering from incurable diseases who had produced discoveries or done work of immense value to the human race in the last few weeks of their lives. Were such men to be exterminated? Might not the physician, in condemning a man to the lethal chamber, be robbing humanity of the possibility of a great product of such a man's brains? Moreover, once the right to death of incurables, with their own consent, had been admitted, the next step would be an admission of the right of other people to decide for them. Then the physician would become at once a suspect, and would lose the confidence of every one of his patients.

Septicemia an "Accident"

As has been often illustrated in previous letters to THE JOURNAL, the Workmen's Compensation Act is so widely drawn up that almost anything which can happen to a workman is held by the courts to be an accident. The following important case has recently been decided in the House of Lords, the highest court in this country. The widow of a workman appealed from a decision of a lower court on the following circumstances. He was employed in the handling and bagging of artificial manures, which were composed largely, or wholly, of bone dust. Jan. 31, 1916, while at work, he became ill with blood poisoning, from which he died, February 16. This illness was due to infection by streptococci and staphylococci. The point of infection was a scratch or abrasion on the skin of the left leg. It was not proved when or how he received this. It was impossible to say with certainty when the infection occurred, though it was probably some days before he became ill. The streptococci and staphylococci were present in large numbers in the bone dust which he had to handle, but they were also to be found in decaying matter, in dust, and in the air, although in a much lesser degree. They might be found on the skin and clothes of persons of uncleanly habits. The arbitrator was satisfied, as the result of the medical evidence, that the infection which caused the illness and death of the workman was derived from the poisonous germs contained in the bone dust which he handled in the course of his employment, and he so found in fact. The case then came before a court, which decided that there was no evidence on which the arbitrator was entitled to find that death was caused by "an injury by accident arising out of and in the course of the workman's employment" within the meaning of the act.

In the House of Lords the Lord Chancellor gave the following judgment, with which three out of four other judges who formed the court agreed. In his opinion the judgment of the lower court could not be supported. The matter was concluded by authority. In a previous case that house had decided (in 1905) that the assault of a bacillus on a workman proceeding from the wool on which he was working, and affecting him with mortal anthrax, was an accident, and that the consequent and fatal disease was an injury. In that case, therefore, the essentials of the composite phrase "injury by accident" were satisfied. That decision might easily prove, with the development of scientific discovery, to be one of far-reaching importance. When the previous case was decided the area conceded by contemporary science to idiopathic disease was much larger than at present, and the area of disease traced to infection by bacilli had correspondingly grown.

Influenza in India

The preliminary report of the sanitary commissioner to the government of India on the influenza epidemic of last autumn has just been published. The epidemic assumed the proportions of a national calamity; no country suffered so severely as did India. In British India, influenza was responsible for a death roll of approximately 5,000,000, and it is unlikely that less than 1,000,000 deaths occurred in the native states. The central, northern, and western portions of India were the worst sufferers. The hospitals in the Punjab were choked so that it was impossible to remove the dead quickly enough to make room for the dying. The streets and lanes of the cities were littered with dead and dying people. The postal and telegraph services were completely disorganized; the train service continued, but at all principal stations dead and dying people were being removed from the trains. The burning ghats and burial grounds were literally swamped with corpses, while an even greater number awaited removal. The depleted medical service, itself sorely stricken by the epidemic, was incapable of dealing with more than a minute fraction of the sickness requiring attention. Nearly every household was lamenting a death, and everywhere terror and confusion reigned. No part of the Punjab escaped. The total estimated influenza mortality during October and November amounted to 816,317, which is 4.2 per cent. of the Provincial population. The poor and rural classes suffered most. The Provincial Sanitary Commissioner attributed this to the fact that such classes were adversely affected by economic conditions resulting from the war and failure of the rains. Food prices were high, milk was scarce, and blankets and warm clothing very difficult to obtain. However, the incidence of the disease was very high among the well-fed British troops in India, greater in fact, among them than among the Indian troops.

Salaried Hospital Staffs

There is reason to believe that the new departure (The Journal, April 12, p. 1091) initiated at the London Hospital—the appointment of whole-time salaried physicians and surgeons, instead of honorary consultants—is likely to be adopted by several of the other great medical schools in London. St. Bartholomew's and Guy's are considering schemes in relation to preventive medicine. The new movement is a great revolution in the medicine of this country. Departments will be set aside for the intensive study of particular diseases, and this study will absorb the whole energies of research workers.

PARIS LETTER

Paris, May 1, 1919.

Health of Schoolchildren in Occupied Territory

At a recent meeting of the Société de pédiatrie, Drs. Génévrier and Heuyer directed attention to the impaired health of the children living in the territory which was invaded by the enemy troops. In the Ardennes especially, the food of the children was woefully deficient, being far from sufficient for their needs. Nurslings had been deprived of milk and flour of good quality, and were forced to eat panada (bread or crackers covered with boiling water) prepared with war bread. Children from 7 to 10 years of age received a very deficient albumin and fat ration. Furthermore, the lodgings were all more or less contaminated by the German troops, and the inhabitants of all ages still continue to sleep on straw infected by vermin. Infestation with lice is very prevalent and from 50 to 60 per cent. of the children are suffering from itch. Children aged from 11 to 12 years have been compelled to do forced labor, which, while not always overtaxing, has, nevertheless, subjected them to the inclemency of the weather, from which they have suffered. Besides these bad physical conditions, other factors affecting their intellectual and moral life have entered in and help to account for the retarded development of these children. They have been set back about eighteen months in development. At school, in the primary grades, cases of anemia and rickets are very numerous. The children of the more advanced grades are all affected by pathologic conditions more or less grave which have been badly taken care of, and many of them present adenopathies. Génévrier and Heuyer urged the immediate institution of corrective measures, and pointed out that the medical services of the various health organizations are far from being in position to cope with conditions. School inspection is needed; school canteens and shower baths should be provided.

Division of Spinal Cord by a Hidden Bullet

Drs. Georges Guillain and J.-A. Barré recently reported to the Société de neurologie an unusual case in which the spinal cord was involved, but for which no cause was discovered in spite of repeated examinations made. A young soldier quartered in rest billets far from the firing line, was seated talking to his comrades. Suddenly he felt a severe pain in the back in the dorsal region and on attempting to get up was unable to arise. He was taken to an evacuation hospital, and from there he was referred to a neurologic service with a diagnosis of transverse myelitis. Reexamination confirmed the presence of a complete paralysis with anesthesia, abolition of tendon reflexes, plantar, cutaneous and flexion reflexes, and sphincter disturbances. Yet there was no apparent injury in the dorsal region nor any painful pressure point along the spinal column. Roentgen-ray examination, however, disclosed a bullet imbedded, point first, in the body of the seventh dorsal vertebra for a distance of 5 cm., one half the depth of the vertebral body. In spite of operative intervention, the man died a few days afterward. The necropsy revealed a division of the spinal cord at the level of the sixth and seventh dorsal vertebrae. Only a slender piece of the left posterior column of the cord maintained its continuity.

This is the only case seen by the reporters in which a wound of the spinal cord by a bullet was not recognized as such. The wound was sustained far from the firing line; there was no external hemorrhage; it was unrecognized by the regimental surgeon, the ambulance surgeons and the neurologists. The point of entrance was almost invisible. The roentgen-ray examination was the only thing that cleared up the situation and explained the nature of the paralysis. It was not ascertainable from what position the bullet had been fired. The bullet had made a physiologic section of the cord, giving rise to symptoms of a complete recent anatomic section. The tendon reflexes were abolished and the cutaneous plantar reflex determined the free flexion of the toes to the right or to the left.

Compulsory Notification of Tuberculosis

The Société médicale des hôpitaux de Lyon, having discussed this question fully, is of the opinion that open cases of tuberculosis should be recorded, in conformity with the bill of Jan. 16, 1919, provided proper measures for the treatment and prophylaxis of tuberculosis be instituted to take care of the large number of patients resulting from such a procedure, and the decree requiring the isolation of tuberculosis patients in hospitals shall be enforced at once. In the absence of such provisions, the society believes that the law will prove ineffective and therefore must withhold its approval.

Tuberculosis and Venereal Disease Prophylaxis

The minister of marine has appointed a commission which will study the question of tuberculosis prophylaxis in the navy and will suggest measures to prevent and combat the development of this disease. Another commission will take up the prophylaxis of venereal diseases in the navy.

International Red Cross Conference

This conference has been held, and a committee charged with this work has published reports of the work done by the sections on tuberculosis, malaria and venereal diseases. The first of these reports contains the conclusions reached by those interested in the campaign against tuberculosis. The following points are considered to be fundamental: (1) dispensaries proportionate to the needs and provided with laboratories and professional visiting nurses who will care for the patients; (2) systematic inspection of schools; (3) hospital care for advanced cases; (4) accommodations in sanatoriums; (5) popular educational propaganda concerning tuberculosis.

The section on malaria has suggested the establishment of an international bureau which, through the assistance of the various Red Cross societies, will effect cooperation with the national agencies charged with the control of malaria. It would be the duty of the bureau to keep abreast of the progress of studies in various countries and associate itself with all existing organizations for the purpose of controlling this disease. It is recommended that a study be made of the geographic distribution of malaria, with the demonstration of means of control, in which connection cooperation with government services is indispensable, for it is really a governmental function.

The section on venereal diseases recommends the organization of entertainments, social and athletic programs, early marriage, isolation of infected persons, systematic preventive treatment, suppression of prostitution, establishment of laboratories, clinics, free consultations, etc.

Marriages

George Adolphus Harris, Jr., Lieut., M. C., U. S. Army, Pittsburgh, on duty in the office of the chief surgeon, Base Section No. 3, S. O. S., London, England, to Miss Sibyl Maude Burton of Walton-on-the-Hill, Stafford, England, February 17.

George Louis Vogel, Capt., M. C., U. S. Army, Boston, on duty at Camp Sherman, Chillicothe, Ohio, to Miss Mary Jane Samuel of Wellston, Ohio, May 2.

Bynum McWhorter Works, Brownsville, Texas, to Miss Anna Lee Konyak of Alta Loma, Texas, at Philadelphia, May 1.

Wyman George Hough, Sibley, Iowa, to Miss Agnes Mai, Marty of Monroe, Wis., at Bismarck, N. D., March 12.

Edson Erwin Blackman, Charlotte, N. C., to Miss Gertrude McWilliams of Raleigh, N. C., April 23.

Elsie Rau Treichler, Germantown, Philadelphia, to Mr. Hiram Ready of Philadelphia, May 1.

William Hamilton Dulaney to Mrs. Emma N. Wells, both of Lynchburg, Va., April 30.

Clarence E. Neipling, to Miss Mable E. Bright, both of Philadelphia, April 30.

Deaths

Frederick Russell Sturgis, Boston; Harvard Medical School, 1867; aged 74; lecturer on venereal diseases from 1874 to 1880, and professor of diseases of the genito-urinary organs and venereal diseases from 1880 to 1882 in the New York University; president of the Medical Society of the County of New York in 1881; visiting physician to the Charity Hospital from 1873 to 1893; a fellow of the New York Academy of Medicine; author of several works and monographs on his specialty; died at his home, May 6.

Angelo Festorazzi, Mobile, Ala.; University of Alabama, Mobile, 1887; aged 54; a member of the Medical Association of the State of Alabama and Association of Military Surgeons of the United States; formerly first lieutenant and assistant surgeon, Alabama State National Guard, and assigned to the First Infantry; a specialist in dermatology; died at his home in January from chronic nephritis.

Frederick Allen Williams ⊕ New York City; Albany (N. Y.) Medical College, 1892; aged 48; medical adviser of the insurance fund of the state industrial commission; for two years a member of the staff of the Hudson River State Hospital, Poughkeepsie; who was injured by the overturning of his automobile near Absecon, N. J., April 26; died in Atlantic City, N. J., May 1, from his injuries.

William A. Hocker, Kemmerer, Wyo.; Bellevue Hospital Medical College, 1868; aged 72; local surgeon for the Oregon Short Line, and health officer of Lincoln County, Wyo.; who had served in both houses of the Wyoming legislature, and was for three years superintendent of the Wyoming State Hospital, Evanston; died in Omaha, April 30, from chronic nephritis.

William A. Morrison, Struthers, Ohio; Western Reserve University, Cleveland, 1881; aged 63; vice president of the Struthers Savings and Banking Company, a member of the first village council, and postmaster for twelve years; died at the home of his daughter in Struthers, May 6, from pneumonia.

Frederick Weisbrod ⊕ Brooklyn; New York University, New York City, 1890; aged 55; a specialist on gynecology; attending gynecologist to the Wyckoff Avenue, Heights and German hospitals, Brooklyn, and consulting gynecologist to the new Utrecht Hospital; died in Philadelphia, May 9.

Nathaniel Harris Kirby, Burdett, N. Y.; New York University, New York City, 1884; a member of the Medical Society of the State of New York; lecturer on dermatology in Denver Medical College from 1889 to 1891; died at his home, March 2, from acute dilatation of the heart.

George M. Getze, Tarentum, Pa.; Hahnemann Medical College, Philadelphia, 1877; aged 64; one of the founders and president of the Allegheny Valley Hospital, Tarentum, and former president of the Tarentum board of education; died in a sanatorium at Clifton Springs, N. Y., May 3.

George S. Burruss, Augusta, Ga.; Meharry Medical College, Nashville, Tenn., 1891; aged 53; also a druggist and proprietor of the Burruss Sanatorium, Augusta; died at his home, April 25, from septicemia, due to a wound accidentally received while performing a surgical operation.

Wilford W. White ⊕ Ravenna, Ohio; Western Reserve University, Cleveland, 1881; aged 60; founder and surgeon to the White Hospital, Ravenna, and local surgeon of the Pennsylvania, Baltimore and Ohio and Erie systems; died at his home, May 8, from chronic nephritis.

Joseph Augustus Treat, Orion, Mich.; University of Michigan, Ann Arbor, 1867; aged 77; also a graduate in pharmacy; at one time postmaster of Orion; said to have been the first patentee of a cash register; died at his home, April 28.

Henry Clay Wilber ⊕ Pine Plains, N. Y.; Bellevue Hospital Medical College, 1867; aged 73; president of the Dutchess County Medical Society from 1891 to 1893; health officer of Dutchess County since 1894; died in Brooklyn, May 6.

William Beam, Philadelphia; Jefferson Medical College, 1901; aged 54; for fifteen years chief chemist in the Wellcome Research Laboratory, Gordon Memorial College, Khartoum, Africa; died in Khartoum, April 15, from heart disease.

Arthur Warren Tucker ⊕ Logansport, Ind.; Miami Medical College, Cincinnati, 1893; aged 48; for many years medical examiner for the relief department of the Pennsylvania system; died at his home, May 7, from leukemia.

Will J. Prince, Piqua, Ohio; Eclectic Medical Institute, Cincinnati, 1883; aged 58; once president of the Ohio State Medical Association; died in the Memorial Hospital, Piqua, March 29, after an operation for intestinal obstruction.

John Henry Frederick Schroeder, Minneapolis; University of Minnesota, Minneapolis, 1915; aged 32; assistant in medicine on the faculty of his alma mater; died in the Minneapolis City Hospital, May 2, from diphtheria.

Everett Jones ⊕ Boston; Boston University School of Medicine, 1898; aged 50; a specialist on diseases of the ear, nose and throat; a practitioner of Brookline and Boston; died at his home in Brookline, April 25.

Oscar Edward Hedrick ⊕ **Lieut., M. C., U. S. Army,** Museville, W. Va.; University College of Medicine, Richmond, Va., 1908; aged 33; died at his home, April 18, from pulmonary tuberculosis.

Henry Carroll Holbrook ⊕ Penacook, N. H.; Dartmouth Medical School, Hanover, N. Y., 1885; aged 59; one of the most prominent practitioners of New Hampshire; died at his home, May 3.

Bernard J. Byrne ⊕ Berkeley, Calif.; University of Pennsylvania, Philadelphia, 1871; aged 69; formerly surgeon of the Baltimore and Ohio Railroad at Ellicott City, Md.; died, recently.

Frank Cole Roberts, Fort Madison, Iowa; Louisville (Ky.) Medical College, 1876; aged 63; a member of the Iowa State Medical Association; died at his home, May 4, from nephritis.

Joseph Henry Robinson, Worcester, Mass.; New York University, New York City, 1864; assistant surgeon, U. S. Army, during the Civil War; died at his home, about April 18.

Wilfred Rivers Clayton, Columbia, S. C.; University of Maryland, Baltimore, 1912; aged 30; died in Hopkins, S. C., February 1, from bronchopneumonia following influenza.

Josiah Sylvang Gardner, Kansas City, Mo.; Hospital Medical College of Evansville, Ind., 1885; died in the Research Hospital, Kansas City, May 5, from heart disease.

Frank Hubert Neuhaus ⊕ Houston, Texas; Bellevue Hospital Medical College, 1891; aged 50; a specialist on internal medicine; died in Hot Springs, Ark., May 1.

Elmer E. Barr ⊕ Hyannis, Neb.; State University of Iowa, Iowa City, 1887; aged 55; died suddenly, May 3, while making a professional call in the country.

Melvin Marcellus Lottridge, Pratt, Kan.; Kansas City (Mo.) Medical College, 1893; aged 60; died at his home, April 26, from cerebral hemorrhage.

William Roberts Williams, Plaza, Wash.; Lincoln Memorial University, Knoxville, Tenn., 1893; aged 59; died at his home in Spokane, Wash., May 5.

Rollin Victor Crittenden, Fredonia, N. Y.; University of Buffalo, N. Y., 1895; health officer of Fredonia; died in a hospital in Buffalo, April 30.

Ewald H. Frielingsdorf ⊕ St. Louis; Beaumont Hospital Medical College, St. Louis, 1889; aged 54; died in Josephine Hospital, St. Louis, May 11.

Nelson C. Scudder, Rome, N. Y.; Hahnemann Medical College, Philadelphia, 1879; aged 55; died, March 3, as the result of an automobile accident.

Hiram Tenney Hardy ⊕ Kaneville, Ill.; Dartmouth Medical School, Hanover, N. H., 1867; aged 81; died at his home, May 7, from erysipelas.

J. Rush Philson, Racine, Ohio; Starling Medical College, Columbus, Ohio, 1877; aged 64; died at his home, April 27, from angina pectoris.

Charles H. Winton, Kalamazoo, Mich. (license, Michigan, 1903); aged 75; died in his office in Kalamazoo, March 4, from heart disease.

Mary A. Sperry ⊕ San Francisco; Woman's Medical College of Pennsylvania, Philadelphia, 1890; aged 55; died at her home, May 7.

David Wiley, Salem, N. J.; University of Pennsylvania, Philadelphia, 1870; aged 71; died at his home, April 30, from heart disease.

Robert Edward Miller ⊕ Chicago; Rush Medical College, 1880; aged 72; died at his home, May 2, from *angina pectoris.*

Irving Clendenen, Maywood, Ill.; Bennett Medical College, Chicago, 1876; aged 72; died at his home, May 6.

Paul Revere Hunn, Hartford, Conn. (license, Connecticut, 1893); aged 72; died at his home, *about April 18.*

⊕ Indicates "Fellow" of the American Medical Association.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

SOME QUESTIONS ANSWERED

Each year the Propaganda department of The Journal receives and answers between four and five thousand letters of inquiry. A large proportion of these letters deal with subjects that have already been discussed in The Journal, and have been reprinted in pamphlet form for easy and inexpensive distribution. Because it does not seem good journalism to reprint, repeatedly, matters that have already been dealt with in The Journal practically all of these inquiries are answered by mail direct. This system, however, ignores the fact that The Journal has many thousands of new readers each year. It also fails to take into account the further fact that the original article on any subject is only read by a certain proportion of those who are The Journal's subscribers at the time it appears. It is desirable, then, occasionally to summarize some of the facts that have already been published regarding certain products or devices not so much for the purpose of restating the specific facts, as for reminding our readers of the large amount of information on the nostrum evil and quackery that is available in the various educational publications issued by the Propaganda department of The Journal. This is the excuse, if excuse be needed, for briefly reprinting a few of the many inquiries that have come in the recent mail:

Kline's Nerve Remedy.—Dr. L. G. Taylor of Hudson, N. Y., writes: "Will you kindly give me information about 'Dr. Kline's Epilepsy Remedy,' Redbank, N. J.?"

Answer: This nostrum was one of several "epilepsy cures" that, about four years ago, were analyzed by the A. M. A. Chemical Laboratory, investigated by the Propaganda department, and described in a series of articles that gave the essential facts regarding the group. The Kline nostrum, one of the usual bromid mixtures, was found to be practically identical with a similar product sold as "Waterman's Tonic Restorative." The matter has been reprinted in full in the pamphlet, "Epilepsy Cures."

Case's Rheumatic Specific.—A member of the editorial staff of one of the leading Boston papers writes, in part: "I am informed that The Journal has published an article about the rheumatism remedy sold by Jesse A. Case of Brockton. I should like to see the article."

Answer: Case's Rheumatic Specific was investigated by the Propaganda department and the product analyzed by the A. M. A. Chemical Laboratory in 1913, an article appearing in The Journal, Jan. 31, 1914. The nostrum was found to have essentially the following composition: Sodium salicylate, 22.4 per cent.; Magnesium oxid, 5.3 per cent.; Licorice root, 72.3 per cent. The article is reprinted in the pamphlet, "Miscellaneous Nostrums."

Diabetol.—An Iowa layman, who does not wish to have his name given, writes: "I have received circulars and letters from the Ames Chemical Co. of Binghamton, N. Y., regarding a preparation they call 'Diabetol,' which they claim is a cure for diabetes. If you have any information as to this claimed remedy, please advise me in confidence whether you consider there is any merit in it or not."

Answer: "Diabetol," which comes in the form of an herb, was investigated by the Propaganda department in 1910. The material was submitted to Professor Millspaugh, Curator of the Department of Botany of the Field Museum, Chicago, and the result of his investigations appeared in the article that was published in The Journal, July 9, 1910. The herb was found to be from a shrub—*Stenolobium stans* (L.)—that grows more or less plentifully from Arizona south through Mexico and Central America. The herb has more or less local reputation as a diuretic. A full report on "Diabetol" has been reprinted in the pamphlet "Nostrums for Kidney Diseases and Diabetes."

Varnesis.—Mrs. Williams (Pennsylvania) writes: "Can you tell me just how much of a fake 'Varnesis' is? I understand you publish such information. If it costs to get this, tell me how much and I will gladly forward the amount. This is supposed to be a rheumatic remedy."

Answer: A brief item on "Varnesis," reporting the findings of the state chemists of Connecticut, is published in the pamphlet "Miscellaneous Nostrums," a complimentary copy of which was sent to Mrs. Williams. At the time of the Connecticut report, Varnesis contained 18 per cent. alcohol, and less than 1 per cent. of vegetable extractives, chiefly derived from laxative drugs and capsicum. Later the alcohol percentage was reduced to 15. Even at that percentage, a person taking it according to the directions, would consume the alcohol equivalent of one-half pint of undiluted whisky every four and one-half days.

Way Ear Drum and Wilson Ear Drum.—Mrs. Neergaard (Michigan) writes: "Will you kindly give me what information you can about George P. Way, Detroit, also the Wilson Ear Drum Co. of Louisville, and their appliances?"

Answer: The George P. Way Ear Drum and the Wilson Ear Drum were both discussed in The Journal, Nov. 1, 1913, and the matter has been reprinted in full in the pamphlet, "Deafness Cures."

Viavi.—Dr. A. R. Rozar, Macon, Ga., writes: "Please give me what information you can on a 'patent medicine' treatment called 'Viavi.' I understand that it is dispensed by agents and not by druggists."

Answer: The "Viavi" scheme emanates from San Francisco, and was very fully dealt with some years ago by the *California State Journal of Medicine*. This article has been reprinted in full, with illustrations added, and appears now in the pamphlet, "Female Weakness Cures." There are various preparations sold under the generic name "Viavi." The "Viavi Capsules" were analyzed for the *California State Journal* and were reported to contain nothing but extract of hydrastis and cocoa butter.

Fulton's Compounds.—Dr. G. B. Taylor, Cameron, Texas, sends the Propaganda department an advertising circular dealing with these nostrums, and asks: "Give me some opinion of the enclosed circular regarding the medicinal properties of this medicine, used for albuminuria and glycosuria."

Answer: The Fulton nostrums were briefly referred to in The Journal as long ago as Jan. 18, 1913. Three years later (Jan. 29, 1916) The Journal published the results of a much more complete investigation of the products. The whole matter has been reprinted in the pamphlet, "Nostrums for Kidney Diseases and Diabetes," and there has been added thereto the government's charge of fraud against the products as reported in a government bulletin in March, 1917.

Nuxated Iron.—Dr. Ross Hopkins, Independence, Kan., writes: "Recently a patient came to me with a skin eruption, and about the only information I obtained was the fact that she had been taking some tablets of 'Nuxated Iron,' made by the Day Health Laboratories of Detroit, Mich. Can you refer me to any statement in The Journal as to the composition of this remedy?"

Answer: "Nuxated Iron" has been dealt with at various times in The Journal, and practically all of the matter has been reprinted in full in the pamphlet "Miscellaneous Nostrums." The analysis by the A. M. A. Chemical Laboratory indicated that each "Nuxated Iron" tablet contained only 1/25 grain of iron, while the amount of nux vomica was practically negligible. Nuxated Iron has been advertised by an extensive campaign of misrepresentation and exaggeration.

Sanosin (Sartolin).—Dr. G. T. Palmer, president of the Illinois Tuberculosis Association, writes: "I am in receipt of a letter from Mr. ——— of Florida, asking for information in regard to a proprietary preparation known as 'Sanosin,' advertised as 'A Highly Successful Home Treatment.' I am enclosing circular herewith. Will you kindly write Mr. ———, giving him such information as you have?"

Answer: Mr. ——— was written to and a complimentary copy of the pamphlet, "Consumption Cures" was sent to him. This contains a reprint of an article that appeared in The Journal, June 18, 1910, regarding "Sanosin," then being introduced in the American market under the name of "Sartolin." "Sanosin" consists of a mixture of powdered eucalyptus leaves, flowers of sulphur, powdered wood charcoal, and oil of eucalyptus. The instructions to the consumptive are that this mixture should be placed on a slab under which an alcohol lamp is burning. The whole thing is supposed to be operated in a room which is tightly closed, and in which the consumptive is supposed to stay. The "Sartolin" advertising matter, at the time The Journal investigated the nostrum, belittled the open air treatment of consumption.

Town's Epilepsy Treatment.—Dr. Parley Nelson, Rexburg, Idaho, writes: "I have a patient taking 'Town's Epilepsy Treatment,' made by the Town Remedy Co. of Milwaukee. If you have any literature on this fake, kindly send me some."

Answer: Dr. Nelson was sent a complimentary copy of the pamphlet, "Epilepsy Cures," which contains the results of the Propaganda department's investigation and the A. M. A. Chemical Laboratory's analysis of the Town remedy, another of the many bromid mixtures.

Correspondence

CIVILIAN MEDICAL ADMINISTRATION AND THE NEED OF TRAINED LEADERS

To the Editor:—The need of a better organization of medical activities is generally conceded. Opinions vary as to the best type of organization. A straightforward system of state medicine seems to many to promise the greatest good. Others, who fear the benumbing effects of a law-bound, bureaucratic state service, suggest as a substitute a state-supervised scheme of sickness insurance, with medical relief for the insured. The strongest of all arguments for compulsory health insurance is, to my mind, that it would open the door to effective medical organization. Compulsory health insurance would not *necessarily* result in effective medical administration, because trained leadership is lacking. It is my belief that the thorough training of even a small group of virile men in the theory and practice of medical administration would materially enhance medical efficiency in this country, and that the time is ripe for such an undertaking. In this connection, let us glance at some of the features of the present situation.

Reports published by the American Medical Association have shown that only a small proportion of the hospitals have interns, the latest data showing the number to be only 17.4 per cent. It is not surprising, therefore, that the American College of Surgeons is finding that few hospitals keep adequate records of their clinical and laboratory work, and are calling for such records as a necessary condition of efficiency. How this deficiency is to be supplied, in the majority of hospitals which are lacking in interns or other personnel competent to keep such records, has not been suggested.

The medical colleges make more and more difficult the pathway of the medical student, while at the same time the number of hospitals increases; consequently, the relative supply of prospective interns rapidly decreases. Moreover, the colleges are dissatisfied with the clinical instruction that hospitals offer their graduates, and with greater and greater emphasis they demand that hospitals which are permitted to employ medical graduates as interns should be brought under the control of the college faculties, at least so far as the training of interns is concerned; to this demand the hospitals are reluctant to yield.

Epidemiologists call upon the hospitals for more complete and uniform morbidity reports; the hospitals reply that they are too poor to undertake additional clerical labor.

Many physicians believe that dispensaries should cease offering free service to the public; the dispensary managers, however, stoutly maintain that the prevalence of poverty amply justifies the prevailing dispensary system.

Social service workers declare that physicians fail to take into consideration the social backgrounds of disease; according to them, the viewpoint of the physician must be radically changed before treatment can become generally efficient. In actual practice, the viewpoint of the physician changes or shifts very slowly.

When the social service worker asks not only for more thorough treatment but for a more careful inquiry into the causes of disease, he touches elbows with the apostles of preventive medicine, whose program embraces eugenics, prenatal care, infant hygiene, school clinics, physical training, the development of recreational facilities, venereal prophylaxis and treatment, industrial hygiene, periodic physical examination, model housing, diagnostic laboratories, and the enactment and enforcement of countless sanitary regulations in urban and rural communities. The relation of the practicing physician to these activities lacks definition.

In letters to the medical press, physicians demand that the state abstain from medical practice; but these very objectors send specimens to laboratories maintained by state and municipal departments of health and thus virtually appeal to the state to aid them in the diagnosis of their cases.

Looking over the country, one observes the transformation of a world-renowned surgical center into a huge diagnostic clinic where group medicine is practiced with such success that surgeons who visit the clinic to study surgical technic become fired with the idea of group medicine and go home eager to form partnerships for the practice of cooperative medicine. On arriving home they discover that group medicine can only be practiced ideally in an institution, and that those who are in charge of suitable institutions, such as hospitals and dispensaries, are not quite ready to turn them over to medical reformers, however well meaning or respectable.

At a critical period of the country's history the established scheme for the training of qualified nurses breaks down, and the leaders of the nursing profession fail to propose adequate measures of relief. In three states there are presented simultaneously six different plans for the solution of the nursing problem; a deadlock ensues, and the country's need remains unsatisfied.

In a thousand communities already possessing imperfectly developed hospitals—hospitals which are wretchedly poor in laboratory equipment and organization—a thousand new hospitals are launched, destined to be poorer still in the essential means of scientific diagnosis and treatment.

Hospitals for the exclusive practice of specialties are begun in communities where the obvious need is the creation of special departments in existing but imperfectly developed "general" hospitals.

Public, semipublic, and private hospitals spring up side by side; why one and not the other, is a question that is hardly considered.

I need not go on. What has been said is sufficient to indicate the lack of clearly defined principles in the development of the machinery of the country for dealing with disease. The muddle seems almost hopeless, but one need not despair if the medical profession can only be made to realize the need of trained leadership. The first thing necessary is to recognize the existence of a tangible problem in which physicians and the public are jointly interested, namely, the problem of medical administration.

Heretofore nobody has been trained in the study of medical administrative problems. The country has drifted into its present chaotic condition because it has been nobody's business to furnish guidance in matters of medical administration. Busy clinicians have here and there thrown out suggestions or made spasmodic efforts for improvement, but for the most part the business of organizing medicine has been left to nonprofessional outsiders. Curiously enough, the need of special training in public health administration is obtaining ample recognition, though this need is no greater than the need of training in medical organization and administration per se. When a state is moved to investigate the need of sickness insurance, and as a preliminary step undertakes to ascertain whether its citizens are receiving adequate medical care, a commission is appointed which usually consists of members of the legislature who are about as competent to report on the subject of medical efficiency as a committee of chimney sweeps would be to report on a problem in astronomy. I have sometimes agreed and sometimes disagreed with the conclusions of legislative committees that have undertaken the investigation of medical problems, but have never been able to bestow much respect on the evidence adduced by uch committees in support of their contentions.

The country may muddle its way through. If so, it will be at the cost of untold suffering and at the needless expense of countless lives. Think our way through we never shall, f the thinking is left to men whose thought and strength are chiefly absorbed by other tasks. Incomparably the best way to treat the matter is to have the study of medical administration organized and directed under university auspices. Universities which already offer courses leading to the degree of doctor of public health are in a favorable position to direct the training of men in medical administration. The two courses would dovetail admirably.

The objection may be raised that teachers of medical administration are lacking. This is true; and therefore, at the outset, the work of special students in this field would have to be to a great extent self-directed; but the gathering of a number of such students at a single center, the assignment to them of appropriate topics of investigation, and the preparation of a series of related theses on phases of medical administration would soon produce a body of thought and fact about which subsequent investigation and teaching could be readily grouped.

The students permitted to participate in this work should be graduates in medicine. Eventually special prevocational courses could be arranged for medical students who purposed following administrative rather than clinical or research medicine; in the prevocational education of the future medical administrator, emphasis should be placed not so much on chemistry, biology, and physics as on psychology, economics and sociology.

What university will be the first to undertake this necessary and valuable work? What philanthropist or philanthropic foundation will be the first to encourage it?

S. S. Goldwater, M.D., New York.

DR. MORTIMER FRANK (1874-1919)—A MEDICAL HISTORIAN

To the Editor:—The sudden death of Dr. Mortimer Frank of Chicago, of whom an obituary appeared in The Journal April 26, was a shock to those of us in the East who had come to know him especially as a research worker in medical history.

Dr. Frank began the study of medical history in his papers on the charlatan oculists, "John Taylor and Sir William Read" (1905), which were followed by others on the Resurrectionists (1907), "Philip Syng Physick" (1911), "Caricature in Medicine" (1911), "Medicine in English Literature Before the Eighteenth Century" (1912), and "Medical Instruction in the Seventeenth Century" (1915). In 1915, he became secretary of the Chicago Society of Medical History and editor of its *Bulletin*, which he much improved in style and format. In 1916, Dr. Frank was invited to read his paper on the "Discovery of the Secretory Glands" before the Medical History Clubs at the Johns Hopkins and Harvard universities. For the Vesalian quatercentenary (1915), he published, at his own expense, a handsome reprint of Henry Morley's "Anatomy in Long Clothes." Dr. Frank was a connoisseur and collector of medical engravings, fine bindings and rare medical books. His private collections were the admiration of his friends and from these he generously donated to the Surgeon-General's Library anything not in its catalogue. At the June meeting of the American Medical Association in 1918, he gave an exhibit of old medical books from his library, with a descriptive catalogue, which is in print. Before his death, he had prepared a lantern-slide lecture on unique title pages in the older medical literature. Dr. Frank's interest in the subject of medical illustration led him to undertake, in 1916, the translation of Choulant's "History of Anatomical Illustration." This book, published in 1852, is one of the classics of medical literature, a work of unsurpassed thoroughness, a sort of *Gradus ad Parnassum* for those who would essay the difficult heights which Choulant has scaled, for the earlier history of anatomy, from Leonardo to the time of Bichat, is mainly in the manuscript illustrations and the illustrated texts. In our days of distracting and divided interests, no man could hope to know the approaches to anatomy in the older writings who has not mastered at least the essentials of this book. Few of us would have cared or dared to attempt such a translation. Choulant is a work of the highest scientific merit, but, in the original German it is not a readable book. Its author wrote in the time of Hegel, his bent was philosophic, his sentences of the sesquipedalian order, like the "long rollers" in Gibbon or Swinburne, or the prosy periods voiced from the pulpit in the Georgian period. Dr. Frank cleverly overcame the almost insurmountable difficulties of rendition by bisecting the long choulantian sentences or dissecting out their meaning, so that his translation now stands, in clean-cut intelligible English, as something viable and readable for modern students. To the original work, long since out of print, the translator added completed bibliographies and an exhaustive *compte rendu* of accumulated research work since the time of Choulant, a man-sized performance in itself. With new illustrations, this modernized Choulant, now in the hands of publishers, may be, in course of time, a *vade mecum* for the professor of anatomy, the medical librarian and the art school.

Dr. Frank was a sportsman and a gentleman, a thoroughly likeable and loveable man, a very faithful and loyal friend.

To those who knew him well, it will always seem triste and unthinkable that he should have been cut down in his prime, just before the appearance of the book to which he had devoted so much of praiseworthy competence and such ardors of patient research.

F. H. Garrison, M.D., Washington, D. C.

"IDENTITY OF THE POPPY IN FLANDERS FIELDS"

To the Editor:—A correspondent in The Journal, April 26, wondered whether Flanders poppies are of the opium kind. Yesterday in a New Hampshire car I saw a loan appeal illustrated with a Flanders grave on which were red poppies with a black center. On talking about it, I learned that the poppy is commonly regarded as the flower of sleep or of death. I enclose two quotations and a reference to a picture, Beata Beatrix, which is in the museum of the Chicago Art Institute:

> On the grass of the cliff, at the edge of the steep,
> God planted a garden, a garden of sleep;
> 'Neath the blue of the sky, in the green of the corn,
> It is there that the regal red poppies are born.
> In my garden of sleep, where red poppies are spread,
> I wait for the living, alone with the dead.
>
> —*From a song by de Lara.*

> Here are cool mosses deep,
> And through the moss the ivies creep,
> And from the craggy ledge
> The poppy hangs in sleep.
>
> —Tennyson: *The Lotus Eaters.*

The dove bears the poppy, symbol of sleep eternal, the death flower—to Beatrix as the sundial reaches its shadowless hour.—Rossetti: Beata Beatrix.

F. K. Bryant, Chicago.

Queries and Minor Notes

Anonymous Communications and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE DIFFERENTIAL STETHOSCOPE

To the Editor:—Please describe the differential stethoscope mentioned in the abstract of Thorne's article published in the London Practitioner, April, 1919. P. W. V., Columbia, Mo.

Answer.—Thorne describes this instrument as follows: "The differential stethoscope consists of the usual binaural ear-pieces and tubing, which are connected with a hollow aluminum chamber, divided transversely by a septum into two compartments, the upper being connected to the ear-pieces by the tubing, the lower having the chest-piece attached to it. The center of the dividing septum is pierced by a conical opening, into which a metal cone can be inserted or withdrawn, closing it completely or varying the size of the opening, and thus allowing more or less of the sounds to reach the examiner's ear. The position of the cone is indicated by a pointer on the upper surface of the chamber, and the figures shown there give the values of the sounds passing through the aperture with the cone in varying positions.

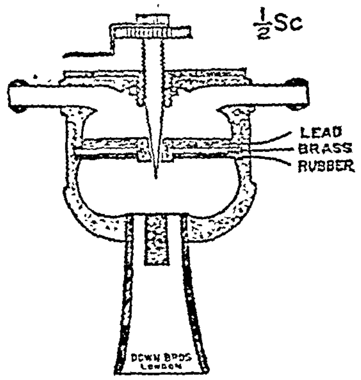

Fig. 1.—Cross section of sound chamber of the stethoscope.

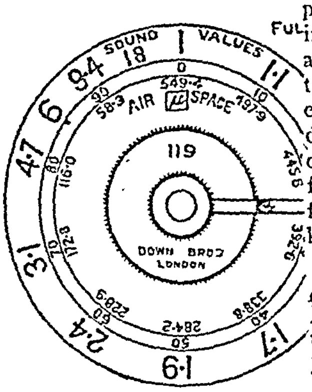

Fig. 2.—Indicator giving sounds.

It has been found by experience that the value of the first sound at the apex in a normal healthy heart is about double that of the second sound at the base. For example, in a healthy heart, if the first sound at the apex registers 3.2, the second sound at the base will be in the region of 1.6; or if the former is 4.7, the latter will be about 2.4. This is considered the normal 100 per cent. ratio. A ratio falling below 50 per cent. normal standard is evidence of myocardial debility. To use the differential stethoscope, apply the chest-piece to the apex of the heart, having previously rotated the pointer one complete revolution from left to right from the closed position so that it stands at 0. Now slowly close it, turning the pointer from right to left until the first sound is just not audible, mark the figure on the dial, perhaps it is 3.2. Now place the chest-piece over the aortic base, and repeat the same procedure, noting the figure at which the second sound is just not audible, say it is 2.4. The figures 3.2 and 2.4 are about 25 per cent. normal. This would indicate a weakness of the myocardium. A normal heart would probably have given a reading of 3.2, 1.6; 4.7, 2.4; or 6, 3.2. That is about 100 per cent. normal standard."

In *The Practitioner* (100:234, March, 1918), O. Peyton gives a very detailed description of this instrument and also publishes some illustrations. He calls attention to the importance of having rubber tubes which are at least two feet long and preferably of not a very thick wall. The object for having these long tubes is to permit of the movement of the chest-piece from one area to another without moving the ear-pieces. The reason why the walls of these tubes should not be too thick is to prevent the conduction of sound along their walls; the sound should be air-borne only.

acter. A subdivision is made of those beverages which contain toxic properties, whether developed naturally in the manufacture or added to the product afterward. The alcoholic beverages, coffee and tea come in this division because of the alcohol or caffein they contain. There would also be included those "soft drinks" to which caffein and (nowadays rarely) cocain have been added. The book, as its title denotes, does not take up for consideration questions of health, hygiene or ethics, although each of these problems is incidentally discussed as occasion seems to demand. The object of the volume is, however, to describe the origin, methods of manufacture, composition and the conditions attending transportation and use of the common beverages. Dr. Wiley's long connection with the Bureau of Chemistry and his uncompromising attitude toward all forms of fraud and misrepresentation give his pronouncements on various problems connected with what may be called the beverage industry of the country, both weight and interest. As its authors says, the book is "not written for the scientific investigator but for the average sober-minded, reasonably well-educated American citizen, who is daily taking a greater and deeper interest in what he eats and drinks." To this class one may fairly assign the rank and file of the medical profession, and the book is one that the average physician will find a valuable addition to his library of semitechnical knowledge.

La Tuberculosis: Conocimientos Utiles Para el que la Padece, Quienes con él Viven y Para Todos los que Deseen Ponerse al Abrigo de la Enfermedad. Distribuido por el State Tuberculosis Sanatorium, Bureau of Correspondence and Information. Carlsbad, Tom Green County, Texas. Rústica. Pp. 35. New York: The National Tuberculosis Association, 1919.

This is a Spanish translation of the pamphlet for popular use previously issued by the National Tuberculosis Association. The prevalence of tuberculosis among the Spanish-speaking population of the Southwest constitutes a serious problem, and the action of the National Tuberculosis Association in making the useful information in this pamphlet available in Spanish is praiseworthy.

Medicolegal

Physician as Witness Getting Percentage of Judgment

(Davis v. Smoot (N. C.), 97 S. E. R. 488)

The Supreme Court of North Carolina affirms a judgment in favor of the plaintiff, administrator of the estate of one A. M. Davis, against the defendant, a physician, for $125, the amount which the defendant had collected of said A. M. Davis for testifying as a witness in a personal injury case against the city in which said A. M. Davis recovered $625. The court says that these issues were submitted to the jury in this action against the physician: (1) Did the defendant knowingly, designedly, wilfully, and maliciously and unlawfully charge A. M. Davis 20 per cent. of the amount recovered by A. M. Davis from the city as alleged in the complaint? Answer: Yes. (2) What amount, if anything, is the defendant indebted to the plaintiff? Answer: $125. The defense was rested on the ground that the agreement was void as public policy, and hence that, the money having been

Answer.—The extremities are rarely involved in chickenpox, whereas they are usually involved more or less extensively in smallpox. The character of the eruption is quite distinctive. In smallpox it is hard, "shotty," indurated. sharply circumscribed, umbilicated, whereas the opposite is true of the chickenpox lesion. This will help to remove any doubt that might exist as to the nature of the disease, if any eruption is present on the palms of the hands or soles of the feet.

Social Questions and Infant Mortality.—To correct the evils which underlie a high infant mortality rate, we must face all the great social questions of our age.—*Public Health News*, New Jersey.

suggestions or made spasmodic efforts for improvement, but for the most part the business of organizing medicine has been left to nonprofessional outsiders. Curiously enough, the need of special training in public health administration is obtaining ample recognition, though this need is no greater than the need of training in medical organization and administration per se. When a state is moved to investigate the need of sickness insurance, and as a preliminary step undertakes to ascertain whether its citizens are receiving adequate medical care, a commission is appointed which usually consists of members of the legislature who are about as competent to report on the subject of medical efficiency as a committee of chimney sweeps would be to report on a problem in astronomy. I have sometimes agreed and sometimes disagreed with the conclusions of legislative committees that have undertaken the investigation of medical problems, but have never been able to bestow much respect on the evidence adduced by such committees in support of their contentions.

The country may muddle its way through. If so, it will be at the cost of untold suffering and at the needless expense of countless lives. Think our way through we never shall, if the thinking is left to men whose thought and strength are chiefly absorbed by other tasks. Incomparably the best way to treat the matter is to have the study of medical administration organized and directed under university auspices. Universities which already offer courses leading to the degree of doctor of public health are in a favorable position to direct the training of men in medical administration. The two courses would dovetail admirably.

The objection may be raised that teachers of medical administration are lacking. This is true; and therefore, at the outset, the work of special students in this field would have to be to a great extent self-directed; but the gathering of a number of such students at a single center, the assignment to them of appropriate topics of investigation, and the preparation of a series of related theses on phases of medical administration would soon produce a body of thought and fact about which subsequent investigation and teaching could be readily grouped.

The students permitted to participate in this work should be graduates in medicine. Eventually special prevocational courses could be arranged for medical students who purposed following administrative rather than clinical or research medicine; in the prevocational education of the future medical administrator, emphasis should be placed not so much on chemistry, biology, and physics as on psychology, economics and sociology.

What university will be the first to undertake this necessary and valuable work? What philanthropist or philanthropic foundation will be the first to encourage it?

S. S. Goldwater, M.D., New York.

DR. MORTIMER FRANK (1874-1919)—A MEDICAL HISTORIAN

To the Editor:—The sudden death of Dr. Mortimer Frank of Chicago, of whom an obituary appeared in The Journal April 26, was a shock to those of us in the East who had come to know him especially as a research worker in medical history.

What Constitutes a "College"

Since all medical schools are now requiring for admission "two years of college work" they will be interested in the definition of a college which was adopted by the National Conference Committee on Standards of Colleges and Secondary Schools at its meeting held in New York City, March 24, 1919. This definition is as follows:

1. A requirement for admission of fifteen (15) units of secondary work, not more than two (2) units of condition being allowed, all special students under 21 years of age being required, except in rare and unusual circumstances, to meet all the requirements for admission, preparatory courses, if any, being distinct in faculty, students, and discipline.
2. A program of studies having a reasonable relation to the resources of the institution.
3. A liberal curriculum, with advanced work in several fields, and a reasonable margin for free election, the curriculum to be of such a character as to qualify for admission to a graduate school of recognized standing.
4. A college year of thirty-two (32) weeks of actual instruction.
5. Eight (8) departments, each having at least one full-time teacher of professorial rank.
6. A staff, two-thirds of which are of professorial rank, having had at least two (2) years of study in a graduate school of recognized standing, receiving salaries of two thousand dollars ($2,000) a year or more, and teaching not more than sixteen (16) hours a week.
7. A productive endowment, beyond all indebtedness, of three hundred thousand dollars ($300,000).
8. An annual income for current expenses of forty thousand dollars ($40,000) a year, at least three-fifths of which is expended for instruction.
9. An expenditure of one thousand dollars ($1,000) a year for laboratory equipment and apparatus, and of one thousand dollars ($1,000) a year for books and periodicals.
10. An annual or biennial published report of assets, income, expenditure, faculty, curricula, and student body.

New York January Examination

Mr. George M. Wiley, director, Examinations and Inspections Division, reports the written examination held at Albany, Buffalo, New York and Syracuse, Jan. 28-31, 1919. The examination covered 8 subjects and included 80 questions. An average of 75 per cent. was required to pass. Of the 93 candidates examined, 60 passed and 33 failed. The following colleges were represented:

College	Year Grad.	No. Licensed
PASSED	(1916)	1
Leland Stanford Junior University	(1918)	1
Yale University	(1898)	1
Illinois Medical College	(1916)	1
University of Maryland	(1917)	1
Boston University	(1918)	4
Tufts College Medical School (1915) (1917, 2)	(1918)	1
University of Michigan Medical School	(1918)	1
Albany Medical College (1917)	(1918, 11)	12
Columbia University	(1918)	2
Cornell University	(1918)	2
Fordham University	(1918)	4
Long Island College Hospital		
New York Homeopathic Medical College and Flower Hospital (1913) (1914) (1917)	(1918, 2)	5
New York Medical College and Hospital for Women	(1917)	1
University and Bellevue Hosp. Med. Coll.	(1918)	10
(1917)	(1918, 3)	4
University of Buffalo	(1916)	1
Jefferson Medical College	(1917)	2
University of Pennsylvania	(1911)	1
Medical College of the State of S. C.	(1917)	1
Medical College of Virginia	(1917)	1
University of Virginia	(1918)	1
McGill University	(1914)	1
Queen's University	(1914)	1
Syrian Protestant College		
FAILED	(1917)	1
Georgetown University	(1918)	1
Howard University	(1902)	1
University of Louisville	(1912)	1
College of Physicians and Surgeons, Baltimore	(1918)	1
Tufts College Medical School	(1917)	1
Fordham University		
New York Homeo. Med. College & Flower Hospital (1916, 2) (1917, 3)	(1918, 4)	9
	(1918)	2
University and Bellevue Hosp. Med. Coll.	(1918)	1
University of Oklahoma (1899)	(1915)	2
Jefferson Medical College	(1917)	1
University of Pennsylvania	(1896)	1
Western Pennsylvania Medical College (1906)	(1917)	2
University of Vermont	(1915)	1
Medical College of Virginia (1915)	(1918)	2
McGill University (1898)	(1918)	2
University of Toronto (1902) (1905)	(1912)	3
University of Naples	(1894)	1
University of St. Joseph		

Mr. Wiley also reports that 5 candidates were licensed by indorsement of credentials from March 1 to April 1, 1919, and 1 candidate was licensed on account of having been practicing in the state for several years. The following colleges were represented:

College	Year Grad.	Indorsement with
	(1915)	New Jersey
Howard University	(1910)	Indiana
Indiana University	(1915)	New Jersey
University and Bellevue Hospital Med. Coll	(1905)	Ohio
Miami Medical College	(1906)	Delaware
University of Naples (1902) Yrs. of Practice		

Book Notices

ESSENTIALS OF SURGERY: A TEXTBOOK OF SURGERY FOR STUDENT AND GRADUATE NURSES AND FOR THOSE INTERESTED IN THE CARE OF THE SICK. By Archibald Leete McDonald, M.D., the Johns Hopkins University. Cloth. Price, $2 net. Pp. 265, with 46 illustrations. Philadelphia. J. B. Lippincott Company, 1919.

For the past five years it has been the fortune of the reviewer to be called on to give the course in junior surgery at a large nurses' training school. He has often been at a loss to recommend to his students sources from which they might supplement the lectures. The average textbook on surgical subjects is written for the medical student or graduate in medicine, and hence presupposes a thorough medical training on the part of the reader; such books, therefore, are confusing to the student nurse, and she often gains an erroneous impression of a subject, even if she may be persuaded to struggle through the appropriate chapters of the recognized authorities.

"Essentials of Surgery" appears to have been written with a clear understanding of the needs and of the capacity of those for whom it is intended. In the preface, the author states:

> These notes are prepared for the use of senior nurses in connection with a course on the principles of surgery, in the belief that the nurse can more intelligently assist in the care of her patient if she has a reasonable conception of the conditions present and of the indications to be met in the treatment. . . . The course covers the general principles of surgical diseases and the pathologic changes which result.

The subject-matter is presented in a concise, logical fashion, with due regard to scientific exactness, and yet without sacrificing simplicity of statement or becoming a mere dry recital of facts. Considering its size, the work is a veritable mine of information, wonderfully condensed, and even the medical student preparing for examination would find here a useful guide.

At the end of each chapter is a table of demonstrations, presumably for the use of the lecturer in amplifying the text. They appear to be worth while.

Thirty pages are devoted to a glossary of words in everyday use in surgery, but which, to the uninitiated, may well be most confusing. While all these terms appear in every medical dictionary, there still seems to be justification for their inclusion in a glossary in this book, since no one can understandingly read, or listen to discussions, concerning a science with the terminology of which he is unfamiliar; moreover, by simply defining terms, one can many times impart information in a few words which might otherwise require pages of explanation.

While heartily approving of the book as a whole, it may not be amiss to call attention to a somewhat careless use of English which occasionally appears. For instance, on page 4, we read: "An antiseptic or germicide is an agent which destroys bacteria, including the following: *A*, direct heat; *B*, steam; *C*, chemicals." While, of course, no one would misunderstand the author's meaning, yet he definitely appears to say that direct heat, steam and chemicals are bacteria subject to destruction by an antiseptic or germicide. Fortunately, lapses of this kind are not common enough to detract from the usefulness of the book, and they are mentioned chiefly to magnify the necessity for careful proof-reading and attention to grammatical constructions in the preparation of books of reference.

BEVERAGES AND THEIR ADULTERATION: ORIGIN, COMPOSITION, MANUFACTURE, NATURAL, ARTIFICIAL, FERMENTED, DISTILLED, ALKALOIDAL AND FRUIT JUICES. By Harvey W. Wiley, M.D. Cloth. Price, $3.50 net. Pp. 421, with 42 illustrations. Philadelphia: P. Blakiston's Son & Co., 1919.

This, a companion volume to the author's earlier work, "Foods and Their Adulterations," comes at an especially appropriate time when the greatest experiment in changing the beverage-habits of a nation is about to be initiated. More than half of the book is devoted to a consideration of beverages of the alcoholic type. Beverages are conveniently divided by Wiley into two main classes, (1) those which, in addition to having condimental properties, have also food value, and (2) those which are purely condimental in character. A subdivision is made of those beverages which contain toxic properties, whether developed naturally in the manufacture of added to the product afterward. The alcoholic beverages, coffee and tea come in this division because of the alcohol or caffein they contain. There would also be included those "soft drinks" to which caffein and (nowadays rarely) cocain have been added. The book, as its title denotes, does not take up for consideration questions of health, hygiene or ethics, although each of these problems is incidentally discussed as occasion seems to demand. The object of the volume is, however, to describe the origin, methods of manufacture, composition and the conditions attending transportation and use of the common beverages. Dr. Wiley's long connection with the Bureau of Chemistry and his uncompromising attitude toward all forms of fraud and misrepresentation give his pronouncements on various problems connected with what may be called the beverage industry of the country, both weight and interest. As its authors says, the book is "not written for the scientific investigator but for the average sober-minded, reasonably well-educated American citizen, who is daily taking a greater and deeper interest in what he eats and drinks." To this class one may fairly assign the rank and file of the medical profession, and the book is one that the average physician will find a valuable addition to his library of semitechnical knowledge.

LA TUBERCULOSIS: CONOCIMIENTOS UTILES PARA EL QUE LA PADECE, QUIENES CON ÉL VIVEN Y PARA TODOS LOS QUE DESEEN PONERSE AL ABRIGO DE LA ENFERMEDAD. Distribuído por el State Tuberculosis Sanatorium, *Bureau of Correspondence and Information.* Carlsbad, *Tom Green County, Texas.* Rústica. Pp. 35. New York: The National Tuberculosis Association, 1919.

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The Supreme Court of North Carolina affirms a judgment in favor of the plaintiff, administrator of the estate of one A. M. Davis, against the defendant, a physician, for $125, the amount which the defendant had collected of said A. M. Davis for testifying as a witness in a personal injury case against the city in which said A. M. Davis recovered $625. The court says that these issues were submitted to the jury in this action against the physician: (1) Did the defendant knowingly, designedly, wilfully, and maliciously and unlawfully charge A. M. Davis 20 per cent. of the amount recovered by A. M. Davis from the city as alleged in the complaint? Answer: Yes. (2) What amount, if anything, is the defendant indebted to the plaintiff? Answer: $125. The defense was rested on the ground that the agreement was void as against public policy, and hence that, the money having been paid, the plaintiff administrator could not recover it back. It is public policy that such a contract as this cannot be enforced, but it is also public policy that such a transaction as this cannot be allowed to stand simply because the defendant was able to enforce payment of the illegal exaction. Besides, there was in this case evidence that the defendant physician gave said A. M. Davis morphin and other medicine; that the latter's mind while the defendant was visiting him and giving him morphin was in a very unsatisfactory condition; and that the defendant, who "had made a very good witness," collected the $125 with great promptness after A. M. Davis had received it.

The ground of the recovery sought by the plaintiff administrator was, not that the defendant swore falsely in favor of A. M. Davis, but that he made representations that his

Legitimate Use of Narcotics in War Time.—The legitimate use of narcotics in the army in war time is roughly divided by Bishop into two broad divisions: First, the necessary administration of morphin to those who are addicted for the control of emergency or other indication—with which every competent physician or surgeon is familiar. To use morphin in such cases is not only legitimate, but failure to use it, Bishop says, would be inhuman and barbarous and result in the loss of hundreds of thousands of lives and the making of wrecks of hundreds of thousands of others. Second, the administration of opiates to those unfortunates, who either through their own ignorance or carelessness or through unavoidably prolonged legitimate or necessary medication have developed in their body the condition of opiate addiction disease—until such time as they can either be furloughed or discharged from active service for the radical arrest by competent medical care of their addiction disease mechanism.

Mosquito Eradication in Southeastern Pennsylvania.—The work done by Royer and Emerson at Hog Island and nearby places is given in considerable detail in this paper. It shows what can be done in malarial districts, how to organize and how to accomplish results. These results show that a comprehensive cooperative project embracing private corporations, municipal and state agencies is practical, providing the work is performed in accordance with a comprehensive plan previously approved by the various interests concerned, and general direction of the project placed in some unbiased central organization, so formed either by law or mutual consent that its jurisdiction covers the entire territory. This would seem to indicate that general supervision should be placed in some permanent, central authority having uniform powers and responsibilities, such as the state department of health. Benefits of mosquito eradication work are far-reaching, and include not only increase in value of properties within the immediate district but also general real estate values within a wide area. The same applies to the benefits to public health. The work carried on under the conditions set forth in this paper has had beneficial results as is proved by the fact that complaints from residents and workers in the district were almost unknown this past summer and that preparations are now being made for the cultivation of large areas of land which for years have remained idle, covered with a luxuriant growth of weeds and water vegetation.

Children's Year Campaign.—The recorded results of the weighing and measuring test give the largest mass of material ever gathered on the measuremens of young children. In a mid-western city of about 70,000 population, largely foreign, the immediate results of cooperation in Children's Year have been three child welfare nurses; a milk inspector; publication of milk reports with bacterial count, sediment, etc.; an agreement between dairymen and farmers by which all milk sold in the town will be produced within a radius of 10 miles and properly taken care of until it reaches the city; a summer hospital for babies; a milk depot; an organization of ten volunteer nurses to look up babies in the congested foreign district and to instruct the mothers how to care for their children; the cleaning up of streets and alleys of the congested districts, and four infant welfare stations, to be established in order to carry on the work permanently. One of the large but less populous states reports 41,000 weighed and measured with 32,000 complete physical examinations by physicians in only one half its counties, with many counties still at work.

As the result of the tabulations of remediable defects from this one campaign, seventeen permanent health centers have been established, several counties have each a public health nurse, and lately the state has established a Division of Child Hygiene under the state board of health. In another more populous state, most competently organized, every county in the state but four (102 in all) has had child welfare chairmen, with 360,000 children weighed and measured. The states have varied widely in their child welfare campaign undertakings, but there is not a state in the Union which has not had some part in the Children's Year weighing and measuring program. Publicity by means of posters, dodgers, stickers, slides, and motion picture films of Children's Year has been widespread throughout the country largely depending for success on the activity and ingenuity of local chairmen. An interesting innovation in propaganda has developed in the portable welfare center and dental clinic. Michigan has a "Children's Year Special," an interurban car which was sent out on a six weeks' trip with a trained nurse in charge. Local committees and local physicians cooperate in each town. The expense of the car is donated by the railroad company.

Health Officer and Enforcement of the Law.—The enactment of comprehensive state legislation on the following lines is advocated by Craster: (1) A state health service similar to the U. S. Public Health Service. (2) The payment by the state of part of the health officers' salaries. (3) A state poor relief or old age pension plan. (4) State insurance against tuberculosis disability. (5) State control of tuberculosis sanatoria with the establishment of state preventoria for children. (6) A milk ordinance for the state. (7) A plumbing code for the state. (8) State control of animals slaughtered for food on farms.

Archives of Ophthalmology, New York

May, 1919, **68**, No. 3

Eye Work with British Expeditionary Forces in France. G. S. Derby, Boston.—p. 217.

Reparative Surgery of Eyes After War Injuries. G. H. Grout, New York.—p. 227.

Case of Acute Retrobulbar Neuritis in a Baby. T. H. Butler, Birmingham, Eng.—p. 240.

Tuberculin in Diagnosis and Treatment of Eye Diseases. E. Torok, New York.—p. 242.

Substitute Operations for Excision of Eyeball. I. Implantation of Metal Ball in Tenon's Capsule. W. M. Sweet, Philadelphia.—p. 257.

Id.—II. Fat Transplantation Into Tenon's Capsule after Enucleation. A. N. Alling, New Haven.—p. 263.

Id.—III. Implantation of Glass Ball Within Tenon's Capsule by Verhoeff's Method. H. J. Howard, Mineola.—p. 265.

Id.—IV. From the Standpoint of the Artificial Eye Maker. P. Gougelmann, New York.—p. 268.

Case of Keratitis Profunda in Both Eyes Following Inoculation with Antityphoid Vaccine. G. H. Bell, New York.—p. 273.

Experimental Production of Panophthalmia by Infection from Blood Stream. P. Wegeforth, U. S. Army.—p. 276.

Annals of Surgery, Philadelphia

April, 1919, **69**, No. 4

*Bone Tumors. Central (Medullary) Giant-Cell Tumor (Sarcoma) of Lower End of Ulna. J. C. Bloodgood, Baltimore.—p. 345.

*Osteogenesis. L. Mayer, New York.—p. 360.

*Effacement of Cavities in Treatment of Fractures. G. Dehelly and G. Loewy, France.—p. 367.

*Synthetic Transplantation of Tissues to Form New Finger. F. H. Albee, New York.—p. 379.

*Experimental Cranioplasty. P. Wegeforth, U. S. Army.—p. 384.

*Hypertonic Gum Acacia and Glucose in Treatment of Secondary Traumatic Shock. J. Erlanger and H. S. Gasser, St. Louis.—p. 389.

*Exposure in Gall-Bladder Surgery. J. C. Masson, Rochester, Minn.—p. 422.

*Long Resections of the Intestine. J. E. Cannaday, Charleston, W. Va.—p. 425.

*Transplantation of Vermiform Appendix into Female Bladder to Supply Absent Urethra. C. M. Rosser, Dallas, Tex.—p. 435.

Treatment of Streptococcus Septicemia Complicated by Wound Diphtheria, Making Use of Transfusion of Blood Immune to the Streptococcus. C. S. Vivian, Humboldt, Ariz.—p. 437.

Double-Eyed Aneurism Needle. A. L. Soresi, New York.—p. 440.

Central Giant-Cell Sarcoma of Lower End of Ulna.—A recent observation made by Bloodgood of this type of tumor involving the lower end of the ulna in which the bony shell was completely destroyed led him to reinvestigate forty-seven cases of giant-cell tumor with especial reference to destruction of the bony shell or its perforation with infiltration of the surrounding soft parts. This study demonstrated that the complete destruction of the bony shell or its perforation at one or more spots with infiltration of the giant-cell tumor tissue has not been associated with any difference in malignancy. There have been no deaths from metastasis in these forty-seven cases. In fact, in these forty-seven cases there is not a single example of death from any cause which could be attributed to the tumor. In many instances the local growth of the sarcoma which has caused death by metastasis, had been just as circumscribed and, in some instances, more circumscribed, than the local growth of the gant-cell tumor. The size of the local growth which produced death by metastasis is not necessarily large. It is, therefore, of the utmost importance, especially in relation to bone tumors, to be able to recognize the giant-cell tumor, because when it is recognized a cure should be accomplished with little or no mutilation beyond that due to the destruction of tissue by the tumor itself. It is important to recognize the central giant-cell tumor at the exploratory incision; and when it is recognized and its benignity accepted, Bloodgood is convinced that more cases will be subjected to curetting and resection will only be done when made necessary by the complete absence of the bony shell, or when resection will leave the limb with equally good function.

Osteogenesis.—Study of two specimens recovered at necropsy, together with extensive animal experimentation, has convinced Mayer that the fully developed bone cell has no power of division and that bone growth results from the activity of cells lying between the bone and the outer layer of the periosteum. Experiments prove that when these cells are removed the bone itself is not capable of reproducing them, but that the periosteum has that power. In transplantations, the bone graft acts partly as a scaffolding for the ingrowth of osteogenetic cells, but it contributes also to its own life, first by the persistence of some of its bone cells, second by the activity of the transplanted periosteum. The graft grows in its new situation and becomes modified in its form according to the changed mechanical conditions (Wolff's law).

Effacement of Cavities in Treatment of Fractures.—The authors emphasize the importance of obliteratng all so-called "dead" spaces which may form after improper treatment of fractures. They remove sufficient bone so that the soft tissues fill in any cavity formed. Thus there is little danger of infection occurring later. They illustrate by citing cases. The Hemequin apparatus is always used by them in these cases and with good results.

Synthetic Transplantation of Tissues to Form New Finger.—In cases in which severe laceration of the hand by high explosive shells and shrapnel necessitated the immediate amputation of the four fingers with all, or the greater part, of the adjoining metacarpal bone, Albee suggests constructing an entirely new digit by means of synthetic transplantation of tissues. The procedure was carried out successfully in two cases. This "finger" has provided in each instance the necessary opposition to the thumb, transforming the hitherto helpless stumps into useful members. The operation was done in two stages. First, a rectangular flap of skin and subcutaneous tissue was turned up from the chest wall and sutured into the form of a *finger*. *Its end* was approximated to the edges of an incision in the stump of the hand made over and down to the distal surface of the os magnum, by the Italian plastic method. A pedicle was left attached to the chest wall to supply nourishment to the newly implanted parts until circulation with the hand should be established thoroughly. In the second step, the boneless finger, cut loose from the chest wall, was first *tunneled* by means of a scalpel and a wedge-shaped mortise was made in the distal-radial surface of the os magnum with an osteotome. Into this mortise a wedge-ended tibial graft, 3 inches long and about ⅜ inch wide, was firmly driven. A sliver graft was affixed along the ulnar side of graft No. 1, for purposes of "bone-seed," or increased osteogenesis. The skin was closed with interrupted silk sutures. The result was excellent. The patient was able to use this new finger for holding a pencil, knife, fork, pulling on his shoes, etc.

Experimental Cranioplasty.—Wegeforth is of the opinion that the logical material to use in cranioplasty consists of plates of cranial bone, for (1) the requirements of protection for the brain and restoration of the shape of the head can be accomplished immediately; (2) the formation of cartilage, with possible resulting exostoses, is avoided. Animal experimentation (on cats) indicates that either living or dead grafts may be used *effectively in the head*. In man, living grafts are recommended, but if they are not available, plates of sterilized cranial bone are preferred to any other tissue.

Hypertonic Gum Acacia and Glucose in Treatment of Secondary Traumatic Shock.—On the basis of animal experiments made by Erlanger and his collaborators and others on the mechanism and treatment of shock, they conclude that slowing of the circulation in a considerable part of the body, or in the whole body, is commonly, if not always, the factor that leads to the development of experimental shock. It is believed that as a result of the slowing of the blood stream the corpuscles clump in the venules and capillaries which then become choked with solid masses of corpuscles and dilate. The blood flow is thus curtailed still further, in fact to the point of interfering seriously with the processes of tissue respiration and nutrition. The effective blood volume is reduced, not alone by the dilatation, but also by transudation of plasma. The organism strives to combat this real and effective reduction in blood volume by the usual mechanism of pouring tissue fluids into the blood stream. Largely, if not exclusively, as a result of the deficient general circulation resulting from the reduction in effective blood volume, the medullary centers, including the vasomotor centers, and the heart, eventually may show some signs of functional insufficiency.

The administration of a combination of hypertonic gum acacia and hypertonic glucose under these circumstances acts beneficially, in several ways: (a) By drawing fluids from the tissues into the blood stream, thus assisting the normal mechanism in restoring the blood volume. (b) By maintaining this increased volume through some property of the gum acacia. (c) By dilating the arterioles through some specific action of the hypertonic crystalloid. (d) By increasing the energy of the heart beat in the same way, and also through direct action of the glucose on the muscle. (e) By augmenting metabolism through the increase in the supply of glucose to the organism between the limits of basal metabolism and self regulation. There is no need of providing salts with this injection, because the solution is given in relatively small quantity (5 c.c. per kilogram of body weight) and very slowly. The withdrawal of water from the tissues seems to do no harm, probably because of the large supply available, and the loss that does occur can and should be made good by the administration of water by mouth, by rectum, and hypodermically. The results obtained through the use of the solution in the treatment of shock-like states in man (twelve cases) and after hemorrhage, show conclusively that the solution is innocuous and they are strongly suggestive, to say the feast, of beneficial action.

Exposure in Gallbladder Surgery.—Masson prefers to remove the gallbladder from below upward. In order to do this well, good exposure of the gallbladder is needed. The method used by Masson is said to help in the more difficult cases to visualize the neck of the gallbladder, the cystic duct and artery, and also their relations to the common duct and the duodenum. The abdominal incision extends from the midline at the tip of the ensiform to a point about 2 inches external to the umbilicus. If it is necessary to remove the appendix the incision may be extended downward, especially if there is an excessive amount of subcutaneous tissue. The stomach, large bowel, omentum and small intestine, are separated from the field of operation by three or four abdominal sponges, held in place by the left hand of an assistant.

In almost all such cases this exposure is all that is needed, even when the right lobe of the liver cannot be rotated. In the exceptional case, however, additional exposure is obtained by inserting a pack (4 inches by 3 feet) between the posterior superior surface of the right lobe of the liver and the diaphragm. In this manner the liver is made to descend slightly, the concave visceral surface is flattened somewhat, and the hilum of the liver is made more accessible. The insertion of this pack is an easy matter and if carefully placed it can in no way injure either the liver or the diaphragm. With an ordinary abdominal retractor the second assistant retracts the right costal margin upward and outward, while with a long shoe horn retractor the first

the dates of final healing differ by the same amount as the lengths of the respective quiescent periods. The diet, therefore, is a factor in determining the date of the beginning of Period II, the period of granulous contraction. The formation of the epithelium, Period III, starts on the same day, irrespective of the diet and the size of the wound. Diet has no effect on either the date of beginning of Period III or the course of epidermization. The difference between the two curves gives the area of the epithelium. After the wound is healed the scar continues to contract until pigmentation sets in. During this latter process it enlarges and reaches a stationary state after pigmentation is complete.

Relation of Spontaneous Nephritis to Experimental Lesions.—An attempt was made by Bloomfield to produce chronic nephritis in rabbits by intravenous injections of streptococci, following a direct injection into the renal artery. Failure to produce chronic glomerular lesions was thought to be due to the means used by the kidney to dispose of injected organisms, which resulted in complete healing if the glomerulus survived the acute injury. Chronic focal lesions were found in many animals. Control examinations of the kidney at the beginning of the experiment, and comparison of differently treated right and left kidneys suggest that all these lesions represented the "spontaneous nephritis of rabbits."

Effect of Different Bloods on Growth of Influenza Bacillus.—In making routine throat cultures, Rivers noticed that on certain days the colonies of *B. influenzae* were large and easy to isolate, whereas on other days they were very small and often overlooked. The results from day to day differed so much that an explanation was sought. It was found that on the days when the colonies were large either cat or rabbit blood had been used and human blood when they were small or overlooked.

Clinical Pharmacology of Digitalis.—Wedd's communication is compiled from data on unselected cardiac and cardiorenal hospital patients to whom digitalis was given, including twenty-nine in whose cases electrocardiographic records were taken every twenty-four hours, or more frequently, during the period of administration of a standardized preparation of the drug. It was soon apparent that successive tinctures supplied to the hospital wards showed marked variation in their efficiency. Two biologically standardized tinctures of approximately theoretical strength were studied and it appeared that the inefficiency of one was due to failure of prompt absorption from the alimentary canal, as was indicated by the larger amount necessary to produce a change in the T wave, the earliest demonstrable digitalis effect. Daily doses averaging 10 c.c. were given and continued until alimentary disturbances or abnormalities in the cardiac mechanism appeared. In no case was there any ill effect attributable to digitalis and there were no evidences of the so-called cumulative action. The toxic dosage showed marked individual variation, from 20 to 100 c.c. The earliest signs of toxicity were slight nausea and premature beats. It is believed to be a perfectly safe procedure and one which will promptly bring about the expected benefits of digitalis to begin with an initial dose of 5 c.c. of tincture and to continue with 8 or 10 c.c. daily until signs of toxicity appear or until clinical improvement warrants discontinuing the drug. In the series studied were cases with all possible valvular defects, all grades of decompensation, renal lesions of varying degrees of severity, systolic blood pressures ranging from 90 to 230 mm. and almost all of the recognized types of myocardial involvement, including cases of intraventricular block and complete dissociation, and there was not found any clinical entity which might be said to constitute a contraindication to the use of digitalis.

Canadian Medical Association Journal, Toronto

May, 1919, 9, No. 5

Recent Work on Chemistry of Blood and Urine. W. Boyd, Winnipeg.—p. 385.
Influence of War on Surgery, Civil and Military. G. E. Armstrong, Montreal.—p. 396.
Exophthalmic Goiter. J. K. McGregor, Hamilton.—p. 406.
Actinomycosis; Case Reports. A. I. McCalla, Calgary.—p. 411.
Clinical Analysis of Recent Epidemic of Pneumonia. G. S. Young, Toronto.—p. 421.
Terminology of Military Reports. J. A. Hislop, Edmonton.—p. 427
Induction of Labor. F. W. Gershaw, Medicine Hat.—p. 430.
*Diphtheroid Infection of Wounds:—Frequency of Diphtheroid Bacilli in Urethritis and Prostatitis. R. M. Janes and N. O. Thomas, Buxton, Eng.—p. 434.

Diphtheroid Bacilli in Urethritis and Prostatitis.—One hundred and twenty-nine wounds were examined bacteriologically (swabs) by Janes and Thomas. Eighty-two, or 63.5 per cent., showed diphtheroid organisms. Of these, thirty were isolated in pure culture at intervals during a period of four months. Three of these proved to be true Klebs-Loeffler bacilli and twenty-seven were wound diphtheroids, that is, 10 per cent. of the isolated organisms were *B. diphtheriae*. Assuming that this is a fair proportion, then 6.4 per cent. of the wounds were infected with *B. diphtheriae*. Clinically, it is impossible to diagnose between diphtheroid and true diphtherial infection of wounds. A membrane does not necessarily indicate the presence of *B. diphtheriae* wounds. It is not possible to distinguish between diphtheria bacilli and wound diphtheroids by morphologic characters. Only by sugar reactions obtained from pure cultures can diphtheroid organisms be distinguished from true Klebs-Loeffler and only after positive animal inoculation is it advisable to diagnose diphtheria in wounds. Flavine appears to have given better results than any other form of local treatment used. The authors believe that it is advisable to administer diphtheria antitoxin in cases of diphtheria in wounds. The importance of giving a sensitizing dose in cases of war wounds due to their having received previous injections of serum is emphasized, on the basis that if this rule is not followed severe anaphylactic reactions will occur in some cases.

Journal of Orthopedic Surgery, Boston

May 19, 1, No. 5

*Some Interesting Back Cases. L. T. Swaim, Boston.—p. 249.
Reconstruction Hospital on Parker Hill. F. C. Cotton, Boston.—p. 256.
*Diagnosis of Syphilis of Bones and Joints. J. O. Wallace, Pittsburgh.—p. 258.
Clonic Spasmodic Contractions, Illustrated by Case of Clonic Spasmodic Contraction of Muscles Around Hip Joint. E. L. Evans, London, Eng.—p. 295.
*Mensurgraph: Method of Measuring and Plotting Orthopedic Deformities by Photography. T. W. Kilmer, New York.—p. 297.
Metacarpal and Phalangeal Traction Splint. H. L. Hess, Kansas City, Mo.—p. 302.
Gunshot Injuries to Joints. R. B. Osgood, Boston.—p. 305.

Rotation of Sacro-Iliac Joint.—Swaim reports a series of cases in support of the theory that rotation of the sacro-iliac joint may occur.

Syphilis of Bones and Joints.—The differential points in the diagnosis of syphilis of bone and joint conditions are discussed by Wallace. He says that in all suspected cases of syphilis of bones and joints, it is essential to go into the family and personal history of the patient in minute detail, bringing out a complete history of the parents as to chronic rheumatism, various eye troubles, chronic bone suppurations, miscarriages, sterility, etc., as well as the definite history of the primary infection in either parent. In the personal history of the patient, in congenital syphilis, one should look for such symptoms as rhinitis, lesions of the skin and mucous membranes, iritis, suppurating lesions of hands or feet and malnutrition. In a negative history one must not overlook the fact that in any suspected case a Wassermann test should be made. In about 15 per cent. of Wallace's cases the condition followed a definite history of trauma. In 50 per cent. of the cases of acquired syphilis osteocopic pain was present in a very severe form; in 19 per cent. of the congenital cases there was no osteocopic pain present, although there was extensive involvement of the bone. Pain was present in every case except one, but it was insignificant in proportion to the pathology present. Swelling was present in 50 per cent. of cases. In 70 per cent. of the cases tenderness was elicited, and of the ten cases not showing tenderness, five were cases of spinal syphilis or Charcot spine. Redness and local increase of temperature were present in only ten cases. Fluctuation was comparatively a rare sign, being present in only 9 per cent. of cases. In twenty-seven cases in which there were joint symptoms, 50 per cent. had limitation of motion. One case showed a characteristic kyphosis with no other local physical signs, although the roentgenogram showed destruction of two dorsal vertebrae. In another case with no deformity, showing no local physical signs, evidence of bone destruction with new deposits of bone was seen in the roentgenogram. In a series of thirty-eight cases, a positive Wassermann was obtained in twenty-four; two doubtful, eight negative—one negative case giving a positive syphilis test. Out of the thirty-eight cases, thirty-five were treated, the treatment consisting either of the administration of arsphenamin or of inunction of mercury and protoidid by mouth or mercury salicylate hypodermically. Marked improvement was obtained in twenty-four cases, five of this number having given a negative Wassermann; slight improvement was present in six cases, one of which gave a negative Wassermann and five a positive Wassermann. Wallace considers the roentgenogram the most valuable factor in the diagnosis of syphilis of bone and joints and in differentiating it from other conditions.

Mensurgraph: Measuring and Plotting Orthopedic Deformities.—The method described by Kilmer consists in using the photographic camera as an instrument of precision the same as a surveyor uses the transit.

Missouri Medical Association Journal, St. Louis

May, 1919, **16**, No. 5

*Myxedema and Hypothyroidism: Report of Cases. G. Dock, St. Louis. p. 145.
*Sub-Deltoid Bursitis and Stiff and Painful Shoulder. A. O'Reilly; F. H. Ewerhardt, St. Louis.—p. 149.
Case of Hemolytic Streptococcus Infection of Blood with Recovery. G. D. McCoy, St. Louis.—p. 154.
Preparation of Neutral Solution of Chlorinated Soda (Dakin) by Electrolysis of Sodium Chlorid, Liquid Chlorin, and Bleaching Powder. J. G. Montgomery, Kansas City.—p. 156.
Reminiscences of Service in Division of Psychology, U. S. Army. M. A. Bliss, St. Louis.—p. 161.
*Early Sign in Influenza (Epidemic Pneumonitis). D. G. Stine, Columbia, Mo.—p. 164.

Thyroid Extract in Myxedema and Hypothyroidism.—In the treatment of these cases Dock begins with a small dose of thyroid extract, about 1 grain, t. i. d., increases it rapidly until physiologic effects appear, and then reduces the dose until a desired condition has been reached. He advises that the dangers and precautions in such treatment be kept in mind.

Subdeltoid Bursitis.—This paper is based on seventy-five cases. A careful analysis was made by O'Reilly and Ewerhardt in fifty cases. There were twenty-three males; of these, seventeen had involvement of the right shoulder, four of which were the result of trauma. In six, the involvement was in the left shoulder, and of these, two were the result of trauma. There were twenty-six females, showing involvement of the right shoulder in fourteen cases with seven due to trauma. In the left shoulder there were twelve cases, with only three due to trauma. Sixteen cases in fifty gave a direct history of trauma. The great majority of the cases in the men, not the result of direct violence, involved the right arm, which is subject to the hardest use. There were thirteen cases of gradual onset in the right shoulder and only four in the left. In the women the distribution is more interesting. In the right shoulder seven were of insidious onset, while in the left there were nine cases. This would suggest that the left shoulder is more vulnerable in women. Of seven cases in the right shoulder, there were two laundresses, one nurse, one "cap shop," and one cleaning woman. All of these occupations would mean a more active use of the right arm. Practically all the housewives had bursitis in the left arm. It may be that housewives have some especial type of work that tends to traumatize the left arm, possibly sweeping. As for treatment, uniformly good results were obtained by means of massage, heat and proper manipulations.

Early Sign in Influenza (Epidemic Pneumonitis).—On examining the records of 300 cases of influenza in which the first symptoms of the disease had developed within twenty-four hours of admission and in which there were no physical signs of consolidation, a sign was recorded so often that Stine regards it as being diagnostic of beginning influenza. In 83 per cent. of the cases, there was a description of "cog-wheel inspiration," or "harsh inspiratory puff," in the record of their entrance examination. These terms were used to describe a physical sign met with on auscultation of the chest. On listening to the breath sounds over the chest, the examiner heard in the lower left back, left axilla, left apex, right apex or right back (mentioned in the order of their frequency), an inspiratory sound more intense and harsh than over the rest of the chest and either broken into "cogs" (a series of inspiratory puffs) filling all the inspiratory phase, or the inspiratory sound was more intense and harsh than over the rest of the chest, but filling only part of inspiration and resembling a single harsh, short puff. The expiratory sound is absent. Stine looks on the presence of this sign as important in diagnosing influenza. It can be differentiated from the harsh breathing that precedes bronchial breathing over a beginning consolidation, by the absence of the expiratory sound. In bronchial breathing the blowing tubular sound appears first during expiration and as the sounds become more intense and harsh, inspiration and expiration are made up of two sounds of about equal intensity and length with a pause between.

Modern Hospital, Chicago

May, 1919, **12**, No. 5

Ross Pavilion of Royal Victoria Hospital, Montreal. E. F. Stevens, Boston; H. E. Webster, Montreal.—p. 311.
Impressions of Desolated Belgium. René Sand, University of Brussels. —p. 316.
Rôle of the Intern in Standardization of Hospitals. W. C. Allen, Chicago.—p. 318.
Canning and Gardening for Mentally Sick. J. C. Clark, Sykesville, Md.—p. 320.
Rehabilitation Through Systematic Exercise. A. F. Gugel, Lakewood, N. J.—p. 322.
Physical Exercise in Care and Treatment of Convalescent Patients. W. D. Powell, Charleston.—p. 324.
Convalescent Hospital in War Service. F. Brush, New York.—p. 326.
Importance of Dental Service in Hospital. A. A. Crocker, Cincinnati.—p. 328.
Medical Asepsis in French and English Hospitals. D. L. Richardson, Providence.—p. 330.
Hospital Accounting. C. A. Porter and H. K. Carter, Chicago.—p. 335.
Greater Community Association at Creston, Iowa. A. E. Kepford, Des Moines.—p. 342.
Little Journeys to Places "Over There." M. J. Robinson, Paris.—p. 348.

New Jersey State Medical Journal, Orange

May, 1919, **16**, No. 5

Some Problems of Industrial Surgeon. C. W. Banks, East Orange, N. J.—p. 149.
Treatment of Acute Inflammation of Upper Respiratory Tract. M. F. Butler, Philadelphia.—p. 153.
Treatment of Uterine Hemorrhages from Modern Viewpoint. H. A. Kelly, Baltimore.—p. 157.
Two Cases of Influenza Treated by Sodium Bicarbonate Intravenously. L. S. Madden, Pleasantville, N. J.—p. 160.

New York Medical Journal, New York City

May 10, 1919, **109**, No. 19

Spring Hay Fever: Its Cause, Prevention and Treatment. W. Scheppegrell, New Orleans.—p. 793.
Direct Visual Method in Treatment of Filiform Strictures of the Urethra. L. Buerger, New York.—p. 798.
Conservation in Management of Trauma and Diseases of Testes. G. F. Lydston, Chicago.—p. 800.
What is Neuritis and How Should it be Treated. W. Martin, Atlantic City.—p. 801.
Meningitis. H. I. Goldstein, Camden.—p. 803.
Syphilis of Stomach. Report of Case. M. F. Morris, Jr., Atlanta.—p. 807.
Case of Brain Abscess. Operation and Recovery. W. C. Bowers, New York.—p. 809.
Pathology and Clinical Forms of Cerebral Abscess. C. G. Cumston, Geneva, Switzerland.—p. 810.

South Carolina Medical Association Journal, Greenville

April, 1919, **15**, No. 4

Pathologic Anatomy and Bacteriologic Findings in Thirty-one Necropsies During Recent Epidemic of Influenza. J. W. Smith, Charleston, S. C.—p. 414.
Psychoses Following Influenza. J. F. Munnerlyn, Columbia, S. C.—p. 417.

Southern Medical Journal, Birmingham, Ala.

April, 1919, **12**, No. 4

Paleopathology. R. L. Moodie, Chicago.—p. 182.
Diagnosis and Management of a Severe Case of Intestinal Toxemia. M. H. Smith, Jacksonville, Fla.—p. 184.
Case of Myxedema: Use of Thyroid Extract. M. B. Allen, Atlanta. —p. 185.
*Studies on Malaria Control. III. Prevalence of Malaria and Its Control by Treating Malaria Carriers. C. C. Bass, New Orleans.—p. 190.
Certain Fundamental Principles of Military Surgery and Their Application to Civil Surgery. W. E. Lower, Cleveland.—p. 194.
*Duodenal Fistula; Case Report. G. A. Hendon, Louisville.—p. 199.
Important Factors in the Postoperative Care of Complications Following Abdominal Surgery. A. W. Ralls, Gadsden, Ala.—p. 203.
Differential Diagnosis of Ureteral Stricture. L. F. Turlington, Birmingham, Ala.—p. 205.
Ophthalmic Practice of Today and its Bearing on Undergraduate Ophthalmic Teaching. H. Woods, Baltimore.—p. 213.
Eustachian Irrigation in Certain Mastoid Operations. J. W. Jervey, Greenville, S. C.—p. 218.

Control of Malaria by Treating Malaria Carriers.—This is one of a series of papers, based largely or entirely on malaria control work conducted jointly by the International Health Board and the Mississippi State Board of Health, in a locality of great prevalence in the Mississippi delta. Experimental control of malaria by treating malaria carriers in Bolivar County, including all methods experimented with and all groups of people, was followed by a reduction of 35.52 per cent., the best for any subdivision being 83.82 per cent. reduction. In Sunflower County, during 1918, in an area of 100 square miles, having a population of over 8,000, the reports of the physicians of the area indicated a reduction of 88.82 per cent. In a subdivision of the area, 440 persons were resurveyed just one year from the date on which they were surveyed and put on treatment. This resurvey indicates a reduction of 89.9 per cent. over the frequency of malaria attacks during the year previous to their first survey and treatment. In Bass' opinion, the conclusion seems justified, that it is practical to obtain a high degree of malaria control in localities of great prevalence in the Mississippi delta by proper treatment of malaria carriers.

Duodenal Fistula.—The fistula in Hendon's case had its origin in an ulcer of the duodenum which destroyed the mucous and muscular wall and produced a pinhole leak in the peritoneal covering; pain and chills and fever were the result of the escape of a few drops of duodenal contents into the surrounding tissues. Improvement of the patient after the chill was due to a temporary closure by lymph deposits over the leak, and subsequent chill and fever were the result of dislodgment of the protecting patch of lymph. This long-continued and intermittent escape of minute quantities of irritating material resulted in the formation of a defensive system of protective adhesions. The discharges were controlled by plugging the opening in the intestine with gauze saturated with compound tincture of benzoin. The fistula closed itself after five weeks.

Southwestern Medicine, El Paso, Texas

April, 1919, **2**, No. 16

Head Injuries from View Point of Psychiatry. M. L. Neff, Phoenix. —p. 1.
An Institution's View of Shortage in Nursing Profession. Sister Walburga, Hotel Dieu.—p. 4.
Some Causes of Misunderstandings between Doctors and Nurses. J. E. S. McDonald, R. N.—p. 8.
The Nurse in the Hospital. J. B. Douner.—p. 9.
Private Nursing in Hospital. M. M. Billingsley, Baltimore.—p. 10.
Private Duty Nurse in Home. M. C. Kirskie.—p. 12.

Tennessee State Medical Association Journal, Nashville

April, 1919, **11**, No. 12.

Better Diagnosis and Better Case Records. R. McKinney, Memphis, —p. 433.
Functions of State Board of Health. R. C. Derivaux, New Orleans.—p. 436.
Surgery of Gall Bladder and Biliary Ducts. J. B. Haskins, Chattanooga.—p. 439.
*Use of Influenza Vaccine as Prophylactic: Experimental Study Conducted by Massachusetts State Department of Health. W. A. Hinton, Boston, and E. S. Kane, Monson, Mass.—p. 442.

Use of Influenza Vaccine as a Prophylactic.—An experimental study was conducted by the Massachusetts State Department of Health to show the necessity of properly controlled experiments to determine the value of a prophylactic remedy during an epidemic. A report of this work is made by Hinton and Kane. The vaccine used consisted of two strains of influenza bacilli, obtained during the present epidemic, one strain being recovered at necropsy and the other from the nose of an infected patient. These organisms were grown on blood agar for from sixteen to twenty hours, suspended in salt solution and heated to 55 C. for twenty minutes. One cubic centimeter of the vaccine contained approximately 800 million organisms. The vaccine was given intramuscularly, at twenty-four hour intervals, into the deltoid and triceps muscles. The injections were 0.5 c.c. on the first day, 1 c.c. on the second day and 1.5 c.c. on the third day. Children under 12 years of age were given one half these quantities. The results obtained were entirely negative. The work was done in an institution in which influenza had not yet made its appearance, the Monson State Hospital for Epileptics, representing a small colony of individuals ideally suited for the purposes of this experiment. Approximately half of the patients were vaccinated, and as far as possible this was done by vaccinating a patient in every other bed of a ward or room. Careful records were kept on 225 patients aged from 4 to 70 years, as to the local and constitutional reactions of the vaccine. No reaction was noted in 184; twenty-six had headache and vertigo; fifteen had cough and coryza. In addition to the forty-one patients who gave reaction, eight gave severe reactions with all of these symptoms. In spite of the fact that the number of injections and the quantity of each injection was the same for each vaccinated individual in this institution, constitutional symptoms were relatively no more frequent in the young than in the older patients. Forty-one patients showed mild constitutional symptoms of influenza, consisting of rise in temperature or nausea or vomiting or coryza or headache. The duration of symptoms was for twenty-four hours or less. The constitutional reaction almost invariably occurred within an hour or so after the second injection. Among the tuberculous patients, the constitutional effects of the vaccine, as far as could be noted, differed in no way from those without this pulmonary complication. In tabulating the results of the epidemic, it was noted that some of the patients having the severest reactions from the vaccination developed influenza, although the interval was from four to thirty-six days after receiving the vaccine. Therefore, the reaction from vaccination did not indicate the susceptibility of the individual to infection, neither did vaccination have any demonstrable effect on the course of the disease. Although the patients consisted almost entirely of epileptics, influenza seemed to have no effect on the number of seizures of infected individuals. In addition to the experimental study carried on in Monson State Hospital, the same influenza vaccine was used for prophylaxis in other state institutions. For one reason or another, no conclusive proof as to value of the vaccine as a prophylactic could be obtained in any of them.

Texas State Journal of Medicine, Fort Worth

May, 1919, **15**, No. 1

Radical Cure of Inguinal Hernia. A. C. Scott, Temple, Tex.—p. 5.
Bromid Eruption: Erythema Multiforme. J. B. Shelmire, Dallas.—p. 7.

United States Naval Medical Bulletin

Supplement for the Hospital Corps

April, 1919, No. 9

Recollections of duty in South Seas. L. C. Sims, U. S. Navy.—p. 7.
Geographical Distribution of Malaria and Yellow Fever. C. Fox, U. S. P. H. S.—p. 15.
Entomological Survey of U. S. Naval Training Station, Norfolk, Va. J. W. Bailey, U. S. N. R. F.—p. 18.
New Naval Medical Supply Depot, Brooklyn, N. Y. R. P. Crandall, U. S. Navy.—p. 40.
Beginners in French Self-Taught. P. O. Skinner, Dartmouth College. —p. 45.
Finger Prints. J. H. Taylor, Bureau of Navigation.—p. 48.
Naval Pharmacist. G. F. Cottle, U. S. Navy.—p. 54.
Work of Naval Pharmacist. C. Schafer, U. S. Navy.—p. 56.
Extraction of Teeth. C. A. Griffith.—p. 63.

Suggested Card-Index System to Replace Present Bill Book of Medical Department. E. E. Heun, U. S. Navy.—p. 68.
Property Accountability and Stock Accounting. E. C. Eastman, U. S. Navy.—p. 72.
Tips to Hospital Corpsmen on Independent Duty. G. D. Taber, U. S. Navy.—p. 77.
Suggestions Regarding Metric System. C. W. Rodgers, U. S. N. R. F.—p. 85.
Reclamation of Surgical Gauze. O. G. Ruge, U. S. Navy.—p. 87.
Device for Saving Time of Examining Surgeon. H. Parker, F. N. R. F.—p. 89.
Biologic Products for Pharmacists. R. P. Fischelis.—p. 93.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

April 19, 1919, 2, No. 3042

*Physics of the Chest. J. Barr.—p. 471.
*War Headache and its Surgical Treatment. L. B. Rawling.—p. 476.
*Influenza Among Poison Gas Workers. F. Shufflebotham.—p. 478.
Antimony in Treatment of Case of American Leishmaniasis of Skin. G. C. Low.—p. 479.
*Antimony Tartrate in Bilharziosis and Tachycardia. J. B. Christopherson.—p. 480.
*Variety and Latency of Organisms on Missiles in the Tissues. F. C. Pybus, H. J. Slade and P. C. W. Laws.—p. 481.
*Inunction of Creosote in Pneumonia and Influenza. J. E. B. Wells.—p. 481.

Physics of the Chest.—The physics of the chest and their relation to the diseases and injuries of the thoracic organs are discussed at length by Barr. He first speaks of the intrathoracic pressure in health, reviewing briefly various experiments and clinical work done to maintain intrathoracic pressure during operations on the chest and its contents. Then he discusses the physics of hemothorax, pleurisy, atalectasis, the lung reflexes, the treatment of pleural effusion and the use of drugs in the restoration of the function of the damaged lung. One drug—common salt—should, he says, as far as possible, be eliminated from the diet, especially in cases of serofibrinous pleurisy, on account of its high osmotic equivalent. When there is a large quantity of effused fibrin, as occurs in pneumococcal pleurisy, decalcifying agents, such as lemons, citric acid, the citrates of ammonium, potassium and sodium may be used. In Barr's opinion, it is well to reserve their use until the acute stage of the accompanying pneumonia has passed, as the lime salts are the most important drugs in the treatment of that disease. In order to hasten the solution and absorption of the effused fibrin there is no objection to the introduction of a small amount of trypsin into the pleural cavity. The injection of a few ounces of sterile liquid petrolatum, which has a lower specific gravity but a higher surface tension than the normal lubricating fluid, lessens the liability to pleural adhesions. In empyema the lung is always more or less collapsed, and in any operation the object should be to avoid any further collapse and to make the lung expand so as to drive the purulent fluid out of the chest. Pneumothorax, visceral hernia into the thoracic cavity, emphysema, asthma, bronchitis, pneumonia, influenza, laryngeal diphtheria and croup, adenoids, whooping-cough and mediastinitis are all considered in this paper.

War Headache and Its Surgical Treatment.—All the cases of war headache in which Rawling did a decompression operation were secondary to gunshot wounds, concussion, fractured base, etc. First of all, he found that: 1. The more severe headaches are associated with an intact skull (closed box) or with small defects. With large deficiencies headaches are less frequent. 2. Frontal and temporal injuries are more commonly accompanied by headache than injuries in the parietal, occipital and cerebellar regions. 3. Wounds near the vertex, in relation to the superior longitudinal sinus, are frequently associated with a severe type of headache. 4. The presence of foreign bodies within the skull is commonly accompanied by chronic headache, more especially when the foreign body is situated in relation to the ventricles of the brain.

In the great majority of cases the headache dated from the moment of recovery from unconsciousness, either from the injury itself or from the operation carried out for the injury. The very first thing that the patient remembers is headache, at first very severe. In many cases special note is made of that point, and in some cases lumbar puncture was carried out for its relief. Previous to transference home the pains abated somewhat, and soon after arrival reached a certain standard. It is on this standard that Rawling gages the diminution, chronicity or increase of the pains. The severity of the headache varies greatly, from mild and inconstant attacks through every degree and grade of headache to the most severe and persistent pains. Perhaps the most common type is a "cyclic" headache. In other instances the pains show little variation in degree, persisting both day and night without intermission; the patient is never free from some degree of headache, varying from "dragging," "weight," "tearing" sensations to a constant dull ache. Wherever the injury, these headaches tend to become localized to the frontal region—behind the eyes—perhaps more acute on the side injured. Often, also, reference is made to the temples. Sometimes also there is a maximum "bursting" pain over the summit of the vertex. In addition to the fact that mental or bodily exertion, noises, joltings, concerts and especially movies, all tend to start the headache or add to its severity, there appear to be two special times of headache development—in the early morning on awaking, and in the evening between tea and bedtime. Associated symptoms are slowing of the pulse rate, with but little raising of blood pressure; marked giddiness; frequent elevation of temperature, night after night; insomnia; slow cerebration; tendency to exaggeration of all reflexes; nausea is uncommon; vomiting is rare; fits, generalized, epileptiform and eye symptoms. These headaches are dependent on some general increase of intracranial pressure, and this in turn is due in the great majority of cases to excess cerebrospinal fluid (cerebral edema).

Rest, dietetics, drugs and lumbar puncture failing to give relief, Rawling urges the performance of subtemporal decompression which will almost certainly bring about relief or cure within forty-eight hours of the operation without in any way risking the patient's life and well-being. A brief summary is given of twenty cases of subtemporal decompression carried out for the relief of headache, chronic and severe, the result of gunshot wound or other injury of the head, the headache leading to total incapacitation and rendering the sufferer utterly miserable. In the majority of cases the patient requested operative measures, all other remedies having failed.

Influenza Among Poison Gas Workers.—The information given by Shufflebotham with regard to influenza among poison gas workers has been collected from twenty different sources in different parts of the country; it all points in the same direction—that with the exception of phosgene gas, workers engaged in the production of other poison gases have enjoyed a very high degree of immunity from influenza infection. It is agreed, on the other hand, that phosgene workers are peculiarly susceptible to influenza, and that the disease, when contracted, assumes a serious course.

Antimony Tartrate in Bilharziosis and Tachycardia.—Christopherson points out that the tachycardia following the intravenous injection of antimony tartrate may not be due to antimony tartrate at all, or at most only secondary to it; it may be due to a totally different cause—to other parasites, for instance—although at the same time bilharzia may be present. Therefore, Christopherson urges that the feces should always be examined for parasites while antimony treatment is on its trial.

Variety and Latency of Organisms on Missiles in the Tissues.—Missiles apparently sterile, or at least giving no clinical indication of infection, were examined bacteriologically by Pybus and his associates. The missiles were extracted for varying reasons, either because they were subject to pressure or caused pressure on nerves, or interfered with movement. Forty-four specimens were sent for examination; nearly 50 per cent. were sterile. Of twenty-three missiles from which cultures were obtained, the staphylococcus was present in ten cases. Putrefactive bacilli, in six cases, were next in the order of frequency. In two cases the tetanus bacillus or organisms of that type were found. The analysis shows that shell fragments, contrary to what might be expected, are more often sterile than bullets. The length of time the missile remained in the tissues varied from one to thirty months. This examination has shown that the *Bacillus perfringens* may survive a period of seven months. In this case the bullet was removed from the tibia, where it was lying without causing any apparent lesion in the surrounding cancellous tissue. After removal no ill effects followed, and the wound healed by first intention. In a second case a fragment of shell was removed from the forearm. Streptococci and the tetanus bacillus were found. The wound suppurated, and immediately on receipt of the bacteriologic findings antitetanic serum was administered; no symptoms presented themselves.

Inunction of Creosote in Pneumonia and Influenza.—The axillary inunction of creosote in pneumonia and in influenza and some allied conditions is advocated by Wells. The method of administration is simple. For adults, 10 minims of pure creosote are gently rubbed into the right axilla with the finger. If necessary, which is very rarely the case, a second dose may be given, this time in the left axilla for fear of blistering. The patient must be dressed in woolen or flannel and placed between blankets so as to avoid a chill after the sweating. Only slight discomfort attends the treatment; a slight burning of the skin, which passes off in a day or two without vesication, is the only disagreeable effect. For children Wells has diluted the creosote with soap liniment, reducing the proportion of creosote according to the age of the patients. For infants, in place of the axillary inunction, he has at times substituted rubbing the neck and front of the chest with a liniment containing creosote. Practically all cases of influenza under his care have been treated by rest in bed (most of them a soldier's bed—that is, on the ground), plenty of fresh air, and the administration of creosote by the mouth. Half a minim of creosote shaken up with half an ounce of water is the simple mixture—the addition of half a minim of oil of peppermint makes it more palatable, but it is not very unpalatable without it. Very few patients treated in this way develop pneumonia. When signs of pneumonia developed the axillary inunction of creosote was nearly always followed by its abortion, or it was so modified that the patient recovered. When the pyrexia of influenza has gone, quinin or strychnin or both may be necessary.

In several cases of meningitis due to infection by *Micrococcus catarrhalis*, and one by meningococcus, the patients recovered after axillary inunction. Wells believes creosote to be particularly detrimental to the pneumococcus, the *M. catarrhalis*, and the influenza germ, and that creosote administered by axillary inunction enters the blood stream through the lymphatics, and is taken direct to the lung tissues by the pulmonary circulation, possibly taking a short cut into the blood stream by the lymphatic duct. Its diaphoretic action helps to relieve the hyperemia of the lung tissues, and thereby removes the nidus for the pneumococcus which might be formed by an exudate; its antiseptic action is brought to bear directly on any germs that may have gained access to the air spaces of the lungs.

Japan Medical World, Tokyo

(Nippon No Ikai)

April 13, 1919

Use of Sensitized Influenza Bacillus Vaccine in Treatment of Influenza. J. Nogata.

April 20, 1919

*Prophylactic Inoculation and Vaccine Treatment of Influenza. T Kitano.

Vaccine in Prophylaxis and Treatment of Influenza.—A sensitized influenza bacillus vaccine has been used by Kitano as a prophylactic and therapeutic measure in influenza with good results. For prophylactic use the vaccine contains 0.2 mg. of the bacilli in 1.0 c.c. of suspension. Among 10,300 persons who were given this treatment, only 285 (2.7 per cent.) had any untoward symptoms, such as local pain and swelling, chilliness, pyrexia—usually slight in degree, headache, anorexia, insomnia, vomiting and diarrhea. In none of these cases were the symptoms of long-duration and rarely were they of any great degree of severity. The same vaccine was used for therapeutic purposes. The dose was the same. The injections were repeated at two days intervals, sometimes as often as six times, until the symptoms disappeared or began to disappear. Eighty-seven patients were treated. In forty-nine the course of the disease was uneventful; in thirty-eight pneumonia was a complication. The mortality among the former was nil; in the pneumonia group it was 5.2 per cent. In 270 cases of influenzal pneumonia treated in the usual manner, the mortality was 23 per cent. With the usual treatment the average number of sick days was 17.2, while in the vaccine treated cases the patient was never ill more than ten days, usually only seven, after the first injection of vaccine. In short, the vaccine lessens the period of illness and lowers the mortality.

Archives des Maladies du Cœur, etc., Paris

February, 1919, **12**, No. 2

*Alternating Respiration. G. Galli.—p. 49.
Attempt to Explain the C Wave of the Jugular Pulse. E. Lenoble.—p. 56.
Roentgen Aspect of Base of Heart in Normal Conditions. E. Bordet.—p. 67.

Alternating Respiration.—Galli reports the case of a centenarian in excellent health and vigor whose respiration resembled the Cheyne-Stokes type, but was distinguished by a special periodicity in the alternating phases, with a crescendo and diminuendo, both in intensity and duration. The only explanation for the anomaly that seemed plausible was a periodically recurring fatigue of the respiration center.

Bulletin de l'Académie de Médecine, Paris

March 18, 1919, **81**, No. 11

*International Scientific Relations. Resolutions Voted.—p. 297.
Alcoholism in Relation to Insanity Among Women. R. Le Clerc.—p. 304.
Endorsement of Prophylactic Calomel Salve To Be Dispensed Without Prescription.—p. 306.
Influenza in Nurslings. C. Achard.—p. 307.
Technic for Smallpox Vaccination. L. Camus.—p. 309.
Infant Welfare Work at Paris (American). A. Lesage.—p. 313.
*Vaccine Therapy of Contagious Lymphangitis in Horses. M. Belin.—p. 314.

International Scientific Relations.—See news item, p. 1477.

Contagious Lymphangitis in Horses.—Belin reports experiences with 1,500 horses presenting bacillary lymphangitis and 400 with cryptococcus lymphangitis, all treated with a pyovaccine. This treatment proved successful in about 75 to 98 per cent. of the cases. It is superior to all other procedures applied to date, he says, while not conflicting with any of them. He describes three methods for preparing the vaccine. The one he has used most is made by agitating vigorously together pus, taken from ripe abscesses, with four parts of ether. It is then set aside for twenty-four hours, agitating occasionally. Then as much boiled water is added as was used of the ether, and the pyovaccine is ready for use. In recent cases of cryptococcus lymphangitis, he injects 2 c.c. in series of seven daily injections, then waits twelve or fifteen days before the next series. With bacillary lymphangitis, he uses 3 c.c. in four daily injections, and then continues with isolated injections, one every five or six days.

April 1, 1919, **81**, No. 13

Primary Malaria in Children. P.-F. Armand-Delille.—p. 395.
*Salt-Free Diet in Epilepsy. C. Mirallié.—p. 398.
Fractures Treated in Germany. A. Bréchot and R. Massart.—p. 400.
The Fifth Cusp is of Atavistic Origin. M. Baudouin.—p. 402.

Epilepsy.—Mirallié has now a record of 183 epileptics treated with the usual sedative plus a salt-free diet. No benefit was apparent in 20 cases; failures are usually in homes where servants are kept. Improvement was manifest in 52 cases, with the disappearance of all seizures in 3. When he found it impossible to get bread made without salt, he had potatoes used instead of bread. The age and the duration of the epilepsy did not seem to affect the result.

This salt-free diet was kept up at least four or five years. His patients gradually came to prefer unsalted food. There was no restriction in the diet otherwise. In 60 per cent. of 161 followed to date, the seizures have not returned. In some the interval is up to twelve years.

Bulletins de la Société Médicale des Hôpitaux, Paris

Feb. 7, 1919, 43, No. 5

Influenza Among the Tuberculous. P.-J. Ménard.—p. 101.
Syphilids in the Axillae. Guerquin.—p. 106.
*Anachlorhydria and Apepsia. F. Ramond.—p. 106.
*The Wassermann Reaction with Chronic Splenomegaly. P.-E. Weil.—p. 111.
*The Leukocyte Balance with Cardiac Instability. C. Laubry and C. Esmein.—p. 115.
*Treatment of Acute Rebellious Dysentery. G. Cotti.—p. 119.
Influenza in Public Hospital. M. E. Lenoble.—p. 125.
*Muscle Signs of Sciatica. Chiray and E. Roger.—p. 129.

Anachlorhydria and Apepsia.—Ramond relates that he found anachlorhydria in 11 per cent. of 340 dyspeptics and apepsia in 0.5 per cent. The anachlorhydria can generally be traced to some infection or intoxication, or to nervous action. Acute carbon monoxid poisoning is sometimes responsible for the anachlorhydria, but alcohol was the most common cause; it was evident in 15 per cent. Hayem incriminates tobacco, but Ramond says that tobacco acts more as a stimulant of gastric secretion. Nervous influences were undoubtedly responsible in certain cases, but they were rare. Melancholia and neurasthenia with a tendency to melancholia were sometimes accompanied by anachlorhydria. Persons with anachlorhydria are small eaters as they thus spare themselves discomfort. For the same reason they avoid meat, fresh bread, beans and peas, wine and coffee. Fatigue and working immediately after meals also induce discomfort. They may also complain of a bitter taste in the mouth on waking, and after meals there is oppression and often nausea with vomiting, sometimes at once or not until late. In nearly 80 per cent. of such patients there is no tendency to dilation or ptosis of the stomach, but rather the reverse, and evacuation is relatively rapid. The anachlorhydria is generally definite or at least of long duration, and it was not modified in his experience by a meat diet or with pig or dog gastric juice or salt, but alkalines often promoted digestion. On a strictly egg, milk and vegetable diet, the symptoms usually disappear.

Wassermann Reaction with Chronic Splenomegaly.—Summarized on page 1398.

Leukocyte Balance with Irritable Heart Action.—Laubry and Esmein state that mononucleosis was evident in twenty-two out of thirty persons with *instabilité cardiaque*. At the same time, there was no relation between the leukocyte formula and the degree of the heart instability or its duration. The leukocyte reactions do not display constancy or fixity enough to be regarded as a fundamental symptom of pathogenic import. In three soldiers with exophthalmic goiter, the leukocyte formula was found normal on three separate examinations.

Treatment of Dysentery by Appendicostomy.—Cotti has treated seven cases of acute rebellious dysentery by systematic flushing of the large intestine with a 1:1,000 solution of silver nitrate introduced through the appendix. The appendicostomy was done under spinal anesthesia. The usual measures had all been tried before to no avail. The dysentery seemed to be of the Shiga type and two of the men succumbed to the profuse hemorrhages which persisted after the intervention or to the progressive severe ulcerations.

Muscle Signs of Sciatica.—Chiray and Roger call attention to the *signe de la pointe*, that is, the inability, with sciatica, to stand on tiptoe. The insufficiency of any one of the three groups of muscles involved prevents assuming or at least holding the tiptoe position. (See also, page 1497, a summary of their previous communication on this subject.)

Journal de Médecine de Bordeaux

March 10, 1919, **90**, No. 5

*Intrapulmonary Serotherapy for Pneumonia. P. Mauriac.—p. 87.
Splenectomy for War Wounds of Spleen; Three Cases. Drouin.—p. 91.
Impressions on Medical Mission to Russia. P. Pietri.—p. 96.

Intrapulmonary Injections in Pneumonia.—Mauriac has only eighteen cases to report and three of the patients died, but in the others the exceptionally grave influenzal pneumonia seemed to have benefited remarkably by the injection directly into the lung tissue of antipneumococcus serum. The lung tissue seemed to bear the injection well. In only half the patients was there even coughing. It is better to withdraw the needle if the coughing is violent; this lesson was taught by one case in which the jerking around of the needle during coughing was followed by a minute hemorrhage. He used a 20 c.c. syringe with a needle 10 or 12 cm. long, pushed gently directly into the lung tissue at the focus of the pneumonia, thus injecting 20 c.c.

Le Nourrisson, Paris

March, 1919, **7**, No. 2

*Infirmary for Infants. H. Méry.—p. 65.
*Habitual Vomiting in Infants. A. B. Marfan.—p. 76.
Study of the Blood and Blood-Producing Organs in Infants. G. L. Hallez.—p. 102.

Infant Infirmary.—Méry reviews the experiences of the last three years at the Médan infirmary which receives infants under 2 suffering from gastro-intestinal derangement. The absolute necessity of breast milk for young infants is emphasized anew by the data presented. After the fifth month they can get along without it, and Méry protests against infants younger than this being sent to the infirmary, as breast milk is not available there. Especially gratifying have been the results of placing infants in families, particularly those taken from homes where there is tuberculosis.

Vomiting in Infants.—Marfan calls the vomiting in the absence of any primary lesion in the stomach, the "disease of habitual vomiting in nurslings." It is evidently a nervous trouble; the gastric mucosa is unduly sensitive, and after each feeding there is a gastro-spasm and the stomach casts up more or less of its contents, breast milk or artificial food, as the case may be. It is a gastric neurosis, which explains the variability of the findings in the chemistry of the stomach and of the stools. If the spasms include the bowel there is constipation. Excessive swallowing of air may complicate the clinical picture. Infants inclined to habitual vomiting generally display a neuropathic tendency. Sometimes a complete change of environment may prove effectual when all else has failed, although the improvement may be only temporary. In other cases, treatment as for inherited syphilis gave sometimes surprising results. The vomit in these cases is usually a colorless fluid, made up of the whey of the milk, swallowed saliva and gastric juice, with floating clots of milk, as the vomiting does not occur at once, not until after fifteen or thirty minutes or an hour or an hour and a half or more after the feeding. The vomiting may occur without effort, or the child may be restless and scream and appear relieved after the vomiting. Sometimes abruptly moving the child may bring it on.

Paris Médical

March 29, 1919, **9**, No. 13

Therapeutics and Manufacturing Chemists. P. Carnot.—p. 245.
Slipping Up of the Patella. P. Descomps and others.—p. 255.
Simple Device to Correct Fracture of the Clavicle. L. Senlecq.—p. 257.

April 5, 1919, **9**, No. 14

*The Arsphenamin Question. G. Milian.—p. 261.
*Technic for the Seroreaction in Syphilis. H. Eschbach and E. Duhot.—p. 270.
*Nature of the Seroreaction in Syphilis. M. Rubinstein.—p. 274.
*Modifications of the Seroreaction in Syphilis. P. Comte.—p. 279.
Prophylaxis After the War. Carle.—p. 282.
*Syphilis of the Stomach. Azémar and Lacapère.—p. 287.
Recent Literature on Syphilis. G. Milian and Burnier.

The Arsphenamin Question.—Milian discusses the disturbances which may follow the use of arsphenamin, especially what he calls *la crise nitritoide* and *l'apoplexie séreuse*. He says that they are both due to the vaso-dilating action of the drug, and epinephrin prevents and cures them. When the drug has not been rendered sufficiently alkaline, it is almost certain to induce congestive phenomena. Neoarsphenamin never induces the nitritoid crises except in extremely predisposed and intolerant persons. By watching for signs of intolerance under graduated treatment, it is possible to guide the doses so as to avoid them. Headache, vomiting, or diarrhea, coming on a few hours after the injection or the next day are gross signs of lack of tolerance. Headache, however, may be merely from a Herxheimer or other reaction and not from the toxic action of the drug, but as it is impossible to distinguish between them, it is better to err on the safe side and not increase the dose unless mercury corrects the tendency in the interval. Lacrimation, watery nasal discharge, excessive secretion of saliva and increase in the size of the testicle are minor signs warning of the impending nitritoid crisis or serous apoplexy, but the most certain and safest guide is the temperature, taken every three hours, the day of the injection. If the temperature goes above 38 C. (100.4 F.) there is marked intolerance. If this occurs with each injection, with the same dose, it might be preferable to drop this drug. A temperature between 37.8 and 38.2 C. the second and third days also testifies to intolerance, and calls for extreme prudence. Epinephrin given promptly at this time will ward off serous apoplexy. Milian remarks that the patients display an incredible carelessness to this important point of recording the temperature every three hours. It is an extremely reliable guide, and its warnings should never be disregarded. The only fatality Milian had from arsphenamin at the center in his charge during the war was of a man whose temperature of 39.5 C., two days after his sixth dose of 0.9 gm. arsphenamin, was ascribed by the attendant to influenza, and Milian was not notified until thirty-six hours later, when fatal coma was already installed. He is confident that if he had taken the proper measures at the critical forty-eight and seventy-two hours, this death might have been avoided. This has been his constant experience in other cases.

He expatiates further on the imperative necessity of making the injection very slowly. By taking ten minutes for it, the injection can be suspended any moment if immediate accidents develop. The syringe is responsible for certain fatalities that might have been avoided by pouring instead of squirting the fluid into the vein. He knows of one man who died on the table from an ultraviolent nitritoid crisis as soon as the concentrated solution of neoarsphenamin had been injected from the syringe. The syringe had also been used in a recent medicolegal case in which the woman died in the physician's office. The syringe is more convenient for the physician, but the patient loses in safety. He suggests further that it is a good plan to adopt the antianaphylaxis precaution of injecting a minute amount such as 1 c.c., and then waiting for fifteen seconds, then inject the same small amount and again repeat this, before allowing the whole amount to enter the vein. This should be the rule for the first injection at least. He does not approve of the practice of giving epinephrin systematically in every case before giving the arsphenamin. He says that this is like the ostrich hiding its head in the sand so it will not see danger. It deprives the physician of the guide as to the tolerance of the patient. There is danger then of unwittingly giving too large a dose. By heeding all these points, Milian exclaims in conclusion, the physician can give arsphenamin effectually and safely. Any neglect of any of them is liable to have fatal consequences.

The Serodiagnosis of Syphilis.—This entire number of the *Paris Médical* is devoted to syphilis, and there are several articles on the technic and nature of serodiagnosis.

Gastric Syphilis.—Azémar reports three cases in which a course of mercury and arsphenamin was tentatively instituted as a last resort before operating for supposed malignant disease of the stomach. Under this treatment the pain, tumor and cachexia promptly disappeared under the arsphenamin; more slowly under the mercury. There had evidently been gummatous infiltration of the wall of the stomach.

Presse Médicale, Paris

April 3, 1919, 27, No. 19

*Influenzal Purulent Pleurisy. L. Bérard and C. Dunet.—p. 169.
*Migraine. P. Pagniez, P. Vallery-Radot and A. Nast.—p. 172.
Inter-Crico-Thyroid Intratracheal Injections. R. Rendu.—p. 174.

Treatment of Purulent Pleurisy.—Bérard and Dunet give an illustrated description of their method of draining at the very lowest point in the side, toward the front, with a counter-opening at the back through which the cavity is flushed out occasionally. Two Carrel tubes are inserted in this posterior opening, the ends of the tubes brought up high on the back and held in place with a strip of plaster. The patient is got out of bed early, not later than three or five days after the intervention. In 26 cases of post-influenzal purulent pleurisy, 5 of the patients died before this treatment could be fully applied. The others recovered, and in half the time required for recovery with other methods of treating empyema of the great cavity. In 5 cases the pneumococcus alone and in 10 plus the staphylococcus was involved; in 4 the pneumococcus and streptococcus, and in 2 the latter alone. They begin with an evacuating pleurotomy; then the anterolateral drainage is installed, and then the solid pus, which has accumulated like actual false membranes, is swabbed out. It is these accumulations which keep up the trouble; he swabs them out with a sponge or wick on a long forceps, working from the back forward, concluding by introducing the Carrel tubes from the rear. The drainage and the flushing out of the cavity with some antiseptic every three hours during the day should be carefully supervised. The patient should be left in peace the first twenty-four hours after the intervention; he should be quite cured in one month. Similar cases given treatment by other technics took sixty or seventy days before the cure was complete.

Prevention of Migraine.—Pagniez and his co-workers, three years ago, reported a case of severe recurring urticaria of alimentary origin which they cured by having the subject eat a small amount of the toxic substance in question one hour before the meal. This practical application of the laws of anaphylaxis proved completely successful in this and several similar cases, showing that the first case was not an exceptional instance. The same reasoning and treatment was applied to migraine, and it has proved remarkably effectual in the five cases here described. The five men and women had been subject to migraine for years, rebellious to all measures. Then one took 0.50 gm. of peptone half an hour before the two principal meals for two weeks, and was free from migraine during that period and for six days after its suspension. Then he had an attack, and resumed the peptone for five weeks and had no further attacks during this period or afterward for six months except a slight headache every ten or fifteen days. At the end of the six months the migraine returned every day, moderately intense. The peptone was resumed for three weeks, and there was no further migraine for nearly two years.

The man's life was completely transformed by the success of this treatment which had not only freed him from the distressing and incapacitating migraine but the functioning of the digestive tract had been transformed as well, losing his flatulence, drowsiness after meals and distress after eating meat and eggs. This patient was a man of 34 who had been subject since the age of 10 to "sick headaches" twice a week, with intense migraine about every six weeks. All the five patients seem to have been definitely freed by the courses of peptone from their tendency to migraine. Other cases of migraine were not modified in the least by the use of peptone. By examining for what Widal calls the *crise hémoplasique* we may be able to distinguish the cases in which this peptone treatment will succeed. It is based of course on Besredka's method now commonly used in serotherapy for warding off anaphylaxis by a small preliminary injection of the antiserum. Its success in certain cases of migraine seems to rank this malady as an alimentary anaphylaxis.

April 7, 1919, 27, No. 20

*Plasma Therapy in Influenza. E. Lesné, P. Brodin and F. Saint-Girons.—p. 181.
*Hernia of the Colon. G. Labat.—p. 182.
*Minor Signs of Aerophagia. G. Leven.—p. 184.

Intravenous Injection of Human Plasma.—Lesné and his co-workers state that citrated plasma is less toxic than out. If the reaction is *strong, it occurs* in less than two minutes; a medium reaction takes three or four minutes, and after the fifth or sixth minute the reaction has no significance. The response is more *sensitive* than the Nonne, Apelt, and Noguchi *reactions. The most intense* reactions were observed in cases of meningitis. He describes four cases in detail in which the diagnosis of meningitis seemed certain, but the negative Boveri turned the scale to exclude *meningitis;* its *findings* were *confirmed by* the course of the cases.

Amazonas Medico, Manaos

June, 1918, 1, No. 2

Blunder in Diagnosis: Fetus in Pouch of Douglas from Tubal Pregnancy. J. de Moraes.—p. 1.
*Colored Urines. F. Vidal.—p. 4.
**Intestinal* Schistosomiasis. A. da Matta.—p. 9.
*Leishmaniosis of Skin and Mucosa. A. da Matta.—p. 11.

Colored Urines.—A young man in the hospital, on account of chronic *nephritis,* began to void green urine, and the liver showed signs of congestion. Chemical tests of the urine *showed the* presence of biliverdin. The patient soon died. Widal knows of a second similar case, and he reviews the various types of colored urine that may be encountered, white, blue, violet, green, red or black. One man of 46 had been taking 3 gm. of tannin daily for some time, and his urine turned black under the action of oxygen. The sweat may also be of abnormal color. A case has recently been recorded at Bahia which presented typical polychromidrosis.

Intestinal Schistosomiasis.—Da Matta publishes what he thinks is the first case of this *kind that has* been diagnosed in the Amazonas region. Intestinal pains, congestion of the *liver, jaundice and alternating* constipation and *diarrhea* were explained by the lateral-spined ova of the schistosomum in the stools. The snails known to be the intermediate hosts of the parasite are common at Manáos. He mentions that Martinez of Porto Rico was *the* first to demonstrate the occurrence *of* schistosomiasis *in* natives *of* America.

Leishmaniosis of Skin and Mucosas.—Da Matta quotes from early writers to the effect that the grave form of leishmaniosis affecting the skin and mucous surfaces was described as early as *1759.* The pottery of the Incas shows reproductions of it from before the discovery of America. Certain regions in Peru seem to be the focus of the disease, but in the course of centuries it has spread from Bolivia and Amazonas to Paraguay. Popular synonyms for the disease are, besides oriental sore, uta and espundia, gallico, kjapa, *tiac-araña,* jaccuya, quecpo and llaga. Da Matta does not discuss the treatment.

December, 1918, 1, No. 3-4

*Rabies in Northern Brazil. A. Passos.—*p.* 75.
**Hexamethylenamin by* the Vein with Liver-Kidney Spirochetosis. A. da Matta.—p. 81.
Classification of Leishmanioses. A. da Matta.—p. 86.
Prophylaxis of Influenza. G. Ramos, F. de Sá, M. de Pinho, M. Leão and S. B. Nunes.—p. 93.

Rabies in Northern Brazil.—Passos reports what he says is the first case of rabies in man that has ever been recognized at Manáos. Rio, Pernambuco, S. Catharina, Rio Grande do Sul, and Belem have each now a Pasteur Institute, and Passos pleads to have one organized for Manáos. He relates that many dogs, cats and other animals developed influenza, but there seemed to be just preceding this an epizootic of rabies among the animals.

Latent Chronic Empyema.—The five articles in this issue of the *Blatt* are by Stierlin's present and former assistants and are dedicated to him on the twentieth anniversary of his assuming charge of the Winterthur *public* cantonal hospital. Schweizer reviews the literature on chronic empyema, and reports a case in which the latent empyema was unmistakably of from twelve to eighteen years' standing, and had never interfered with the earning capacity. He has found four somewhat similar cases on record, and in none of them was the empyema suspected. *In his* case the operation was *undertaken* for caries of the ribs. Iselin is right when he warns that we are too ready with the diagnosis of caries of the ribs, and *overlook the* primary lesion within. Sometimes the latent *empyema may* be a necropsy *surprise,* or an acute exacerbation *may* first attract attention to it. The operation in these *old* cases requires resection and removal of the encasing, *often* calcified, cuirass formed by the hardened pleura, and also *removal of* hardened lung *tissue.* In his patient, the pus from the unsuspected bilateral empyema finally worked its way into the *subcutaneous* connective tissue, but it was a *whole* year doing this. In Tuffier's case, this occurred in the course of a *few days.* In Sweet's case, epigastric pain and *vomiting* accompanied it. In Schweizer's case, the lung *expansion returned to* approximately normal after *the second* operation. The earning capacity was regained, but a further *minor operation* is now contemplated. In conclusion he *warns that* even *if* the empyema lies latent for a decade or more, *it is still* dangerous; the dangerous consequences *are only postponed.*

Nephrectomy.—Thellung *reports* a case of fatal paralytic ileus following removal of a tuberculous kidney in a man of 43. The conditions *otherwise* were favorable, except *that* the kidney was drawn up high against the spine, and 165 c.c. of ether had to be used. Of *the* 42 nephrectomies of *the last* twenty years 6 of the patients died from shock or heart weakness *or* a necrotic process in the bowel. The *mortality has* dropped from 30 or 40 to from 3 to 10 per cent. in the two decades. In 16 of the 22 cases of tuber-

Anales de la Facultad de Medicina, Montevideo

November and *December,* 1918, 3, No. 11-12

Radiology *of* Pelvic Colon and Rectum. *J.* T. Case (Chicago).—p. 745.
**Latent* Cancer of Lung. A. Ricaldoni.—p. 770.
Dysentery in Uruguay. A. Gaminara.—p. 800.
**Amebic Tumors in* Large *Intestine. E. P.* Lasnier.—p. 810.
Cecropia Peltata in Therapeutics. M. F. Langon.—p. *829.*
Epinephrin in *Influenza.* A. Ricaldoni.—p. 867.

Latent Cancer of Lung.—In Ricaldoni's case a man of 65 was an *itinerant* peddler who had complained for five months of right suprascapular pain. Finally atrophy and paralysis developed *in the* region innervated by the brachial plexus. There was no dyspnea, no blood in the scanty sputum, and the roentgen and palpation findings were negative. The pains varied, sometimes preventing sleep and again almost disappearing. The man died suddenly one night. An extrameningeal radiculitis seemed most plausible, and its tuberculous nature was suspected. Necropsy confirmed the extrameningeal site of the trouble but showed that it was of malignant nature, a diffuse epithelioma of the lung, with metastases in the pleura and surrounding tissues, presumably secondary. *Five illustrations* and one colored plate reproduce the histologic *findings,* especially the sclerosis in the nerve. Analysis of this case and similar ones on record suggests that some of the cases *of* partial and unilateral paralysis which have been classed as toxic or dyscrasic neuritis, from chronic bronchopneumonia or *pulmonary* tuberculosis, are in reality the consequence of the spreading of the inflammation to the pleural dome. This mechanism was unmistakable in the present case.

Amebic Intestinal Tumors.—Lasnier's illustrated cases demonstrate the *possibility* of amebic inflammatory tumors in the *intestines.* He *reiterates* that this possibility should be borne in mind, and treatment *for* the amebiasis instituted before considering operative measures. The discovery of the ameba *will often* confirm the diagnosis as the tumors otherwise are liable to be ascribed to tuberculosis or other causes.

Annaes Paulistas de Med. e Cir., S. Paulo

December, *1918, 9, No. 12*

*Measures Against Malaria in the Orient. S. T. Darling.—p. 265.
*Hashish Smoking. F. de Assis Iglesias.—*p.* 274.

Local Measures Against Malaria.—Darling emphasizes that the measures for prophylaxis against malaria must *necessarily* be local, and that they have to vary with *local conditions.* For example, the drains that last *indefinitely* in a clayey region would be washed out by the *torrential* rains in a more sandy soil. He describes the measures that have proved effectual in the Malay States, especially *the* straightening and deepening of small streams, with *underground* drains. He commends the appointment of an antimalaria board to study local conditions. In the Malay States the board includes the chief of the public health service, a civil engineer, a bacteriologist, a member of the cabinet, a physician, and the owner of a large plantation—each one selected for special experience and skill. The training of the children in prophylaxis of malaria is regarded as important, and posters in several languages serve to warn the populace. The constant intelligent care of the drains, etc., is an important part of the work, as also the determination of the local species of mosquitoes that serve in the transmission of malaria, so that prophylactic measures can be focused on this species.

Hashish Smoking in Brazil.—Iglesias states that *Cannabis sativa* is cultivated in certain regions in the north of Brazil where it is smoked in a special pipe, the smoke passing through water, or in the form of a cigar. He has been experimenting with laboratory animals placed in conditions like those of these human inhalers of the cannabis smoke. The animals showed signs of toxic action, vomiting, paralysis and torpor, but they were transient; the animals had quite recuperated by the end of two hours. Injection by the vein of some of the water through which the smoke had been passed caused no toxic symptoms in the animals. Iglesias describes some special instances of the cannabis smoking vice to illustrate the apparently inevitable mental derangement which its frequent use entails, the hallucinations liable to lead to crime or suicide. The cannabis smokers often form clubs for smoking in common at first, but when they become addicted to the vice they prefer solitude, and gradually fall into the aspect and manners of idiots. The drug is called mostly diamba in Brazil, hashish in the Orient. *Iglesias urges prompt government measures to check this vice.*

Gaceta de los Hospitales, Mexico, D. F.

February, 1919, **2**, No. 1

*The Work of the Congress on Typhus. E. Landa.—p. 1.
*The Problem of the Etiology of Typhus. A. B. Vasconcelos.—p. 12.

The Problem of the Etiology of Typhus.—The proceedings of the recent Mexican Congress on Typhus were mentioned in the Mexico Letter in The Journal, Feb. 8 and 15, pp. 435 and 508. Vasconcelos pleads for the organization of a special institute for experimental research on tabardillo or typhus, or at least to reestablish the prize instituted by the minister of public instruction, D. Justo Sierra, to stimulate research on typhus and reward the discovery of the causal germ. Until this is realized, antityphus serum should be obtained in ample amounts. He specifies Nicolle and Blaizot's antiserum for the purpose as having given the best results to date.

Gaceta Medica de Caracas

Feb. 28, 1919, **26**, No. 4

Influenza in Venezuela. F. Mendoza and others.—p. 37.

Medicina Ibera, Madrid

Feb. 22, 1919, **6**, No. 68

Nephritis. S. Pascual.—p. 169. Cont'n.
Diagnosis of Ovarian Cysts. R. B. de Bengoa.—p. 175.

March 8, 1919, **6**, No. 70

Partial Nephrectomy. P. Cifuentes.—p. 209.
*Three Supernumerary Pupils. J. González.—p. 210.
Hyperchlorhydria in Spain. R. M. Terol.—p. 212. Conc'n.
Varices and Syphilids. Sicilia.—p. 217.

Polyopia.—González gives illustrations of the right eye of a girl of 11 with three supernumerary pupils. The dilation of the pupil under atropin partly closed these supernumerary openings, and temporarily cured the annoying double polyopia. A permanent cure was realized by iridectomy, thus fusing the larger opening with the natural pupil.

Revista de la Asoc. Med. Argentina, Buenos Aires

January, 1919, **30**, No. 170

Penetrating Abdominal Wounds. J. C. Ahumada.—p. 5.
Comparative Value of Pirquet and Mantoux Tuberculin Tests. A. Casaubon.—p. 34.
*Memoirs of a Hygienist. E. R. Coni.—p. 55. Conclusion.
Bilateral Vagotomy in Guinea-Pigs. L. Giusti and B. A. Houssay.—p. 165.

Memoirs of Pioneer in Public Hygiene.—As mentioned in The Journal, Sept. 15, 1917, the Argentine Medical Association resolved in 1917 to enter the publishing field to a certain extent, so that the best medical works by Argentine *writers would get their chance of publication.* The series of books thus to be published by the association are to be known as the Biblioteca Medica Argentina. The first book of the series is the "Memoirs of a Hygienist," by Dr. Emilio *R. Coni, who has been a leader in public health matters and* hygiene so that his autobiography forms a complete history of public hygiene in Argentina. The work has been published as a serial in the *Revista de la Asociacion Medica Argentina,* and this is its concluding instalment.

Revista Medica de Yucatan, Merida

Jan. to March, 1918, **11**, No. 6

Pterygium. Pathogenesis, Treatment and Prognosis. R. Sauri.—p. 1.
*Eosinophilic Proctitis. A. Lara N.—p. 2.

Eosinophilic Proctitis.—Lara was unable to find amebas or any helminths in 80 per cent. of the stools of young children presenting symptoms of enteritis suggesting dysentery. Scraps of the bleeding mucosa from eighty-seven infants showed a yellow layer of eosinophil cells with granular protoplasm, and numerous Charcot-Robin crystals. The blood count in eleven in this group showed an average of 7 per cent. eosinophils during the acute phase, and of 11 per cent. at defervescence. Necropsy of three of the infants, from 9 to 15 months old, revealed congestion and ecchymotic patches. Along with the dysenteriform enteritis and slight fever, there was sometimes an occasional dry cough, with signs of alimentary autointoxication plus infection, favored by the general depression from teething, the whole presenting a clinical picture like that of eosinophilic proctitis.

Rev. Sud-Amer. de Endocrinologia, etc., Buenos Aires

March 15, 1919, **2**, No. 3

Influenza in Argentina. S. Dessy, F. Grapiolo and C. Spada.—p. 65.

Semana Medica, Buenos Aires

Feb. 27, 1919, **26**, No. 9

*Tuberculin Treatment. J. J. Vitón.—p. 205.
Epizootic Meningitis in the Horse. C. F. Flores.—p. 208.
*Progress in Hygiene in Buenos Aires. E. R. Coni.—p. 212.
*Fluorids and Endemic Goiter. L. Goldemberg.—p. 213.
The Coolidge Tube. C. Heuser.—p. 223.

Tuberculin Treatment.—Vitón says that every day he grows more enthusiastic over the result of treatment of tuberculosis with "ultra small" doses of tuberculin which give, he says, "ultra gratifying" results. By "ultra small" he means 1 per thousand million (A); 1 per ten thousand million (B); or 1 per hundred thousand million parts (C). The more acute the symptoms, the smaller the dose that should be used. He regards any general reaction as distinctly injurious; the persons particularly liable to respond with a general reaction are those inclined to asthma, the febrile cases, certain dyspeptics, and certain persons with painful rheumatism. He makes these ultra small doses by taking one part of a 1 per ten million dilution and diluting it with nine parts of a ¼ aqueous solution of phenol. He found further that symptoms following a reactive dose of tuberculin subsided under a following ultra small dose of the same tuberculin.

Progress in Public Health in Buenos Aires.—Coni's statistics confirm that the progress in sanitation, etc., during the decades since 1858 have reduced the annual death rate per thousand inhabitants from 37.3 to 15.2; in 1917 it was only 13.7. "The second largest Latin city has thus reached a death rate which compares favorably with the large cities of England, supposed to be the healthiest in the world."

Pathogenesis of Goiter.—Goldemberg noticed that fluorids seemed to check oxidations by animal oxidases in vitro. Administered to young rabbits in minute, repeated doses, this action was confirmed by the drop in temperature which followed each dose. Later there was a hyperthermic reaction which lasted several days. No influence on the thyroid was perceptible. Perhaps larger animals, dogs and goats, might have had the thyroid affected more.

Siglo Medico, Madrid

March 8, 1919, **66**, No. 3404

*Bone Implants in Treatment of Fractures. J. Bravo.—p. 185.
Influenzal Bronchopneumonia; Treatment with Chemical Catalysis. L. C. Cambon.—p. 189.

Bone Implants in Treatment of Fractures.—Bravo adds his testimony to that of others in regard to the advantages of implanting a peg of bone for fracture or pseudarthrosis, taken from the patient's own tibia or fibula. He gives some roentgenograms of a few cases to illustrate the advantages of the method.

March 22, 1919, **66**, No. 3406

Traumatic Pneumonia. S. Pascual.—p. 229.
*Morphin Addiction. C. Juarros.—p. 232.
The Conception of Pretuberculosis. B. Gil.—p. 233. Cont'n.
Introduction to Study of Surgery. J. G. Capdevila.—p. 235. Cont'n.

Treatment of Morphin Addiction.—Juarros remarks that morphinomania is becoming every day more and more common in Spain, while there is a lack of adequate institutions for its treatment. He does not approve of sudden withdrawal of the drug, but prepares the patient for it with a course of alkalines to combat the hyperacidity common in morphin addicts. He gives the alkalines in the form of Vichy water to drink or by injection, and sodium bicarbonate in injections. He prefers subcutaneous injection of the Vichy water, increasing gradually from 1 to 100 gm., or a 4 per thousand solution of sodium bicarbonate in isotonic saline. If the patients object to the injections, the alkaline has to be taken as a beverage. The alkaline treatment is merely an adjuvant, but he regards it as a powerful aid.

Vida Nueva, Havana

January, 1919, **11**, No. 1

Roentgen Verification of Proper Location of Duodenal Tube. P. L. Fariñas y Mayo.—p. 3.
Transvesical Prostatectomy. A. G. Casariego.—p. 7.
Application of Plasmogenesis to Medicine. A. L. Herrera.—p. 12.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

Feb. 15, 1919, **1**, No. 7

International Standards for Medical Students. G. Van Rijnberk.—p. 501.
*Treatment with Strophanthin in Series. J. Lankhout.—p. 508.
*Fracture of Neck of Femur. J. A. Korteweg.—p. 513.
Rapid Infectious Gangrene of Penis. D. B. Boks.—p. 519.

Strophanthin Treatment.—Lankhout found that the irregular heart action and pulse of 160 failed to respond to digitalis in the woman of 40, but marked improvement followed injection of 0.00025 gm. strophanthin. This effect was constantly realized by the strophanthin, and he finally had the woman take this drug systematically over long periods. By this means he kept her cardiovascular apparatus in comparatively good condition. The injections were given with several days' intervals, and no untoward by-effects were observed from the thirty-two injections in this case or the nineteen in a second, similar case of this pulsus irregularis perpetuus.

Fracture of Neck of Femur.—Korteweg discusses Noordenbos' method of treating fracture of the neck of the femur by driving a peg through into the head, axial to the neck. He uses a peg cut from the fibula, but this breaks *so* readily that Korteweg proposes an ivory peg as more suitable. He thinks this method is applicable only for young healthy persons, and after reduction of any invagination.

Norsk Magazin for Lægevidenskaben, Christiania

February, 1919, **80**, No. 2

*Retention of Chlorids in Uremia with Convulsions. J. Holst.—p. 113.
*Retroperitoneal Sarcoma. P. Bull.—p. 145.
*Isolated Bladder Tuberculosis. E. Platou.—p. 151.
*Nitrogen in Urine and Blood. H. Salvesen.—p. 157.
*Infectious Jaundice. L. Nicolaysen.—p. 170.

Retention of Chlorids in Uremia with Convulsions.—Holst reviews the research in various countries which has led to the conception of "chloridemia"—analogous to azotemia—to express the condition resulting from the inability of the kidneys to eliminate chlorids. The clinical manifestations for which the retained chlorids are responsible (according to Widal), include headache, vomiting, respiratory disturbances, convulsions and coma, and possibly the eclamptic *equivalents*: paralysis, amaurosis and tendency to deafness. This clinical picture is identical with that of eclamptic uremia, but Holst proceeds to show by detailed study of 9 cases of varying types that these manifestations cannot *be ascribed to the concentration of the chlorids in the blood* serum. When the chlorids are retained, enough water is always retained with them to keep the concentration practically at a constant level. It is the retention of the water *necessary for this* that causes the trouble, the brain, lungs and viscera becoming edematous. In 2 of the cases presenting the classical picture of chloridemia, the chlorid content in the blood was high, 6.5 or 6.7 per thousand; urea 0.283 or 0.258 per thousand. In 2 other cases with symptoms of pure uremia with convulsions the chlorid content was within normal range: 6.2 and 5.9, with urea 0.36 and 0.25. In another group of 2 the chlorid content of the blood was high, 7 and 6.6, but one had never shown any symptoms of disturbance from retention of urea or chlorids, and always felt subjectively well in spite of his amyloid kidney; the other had apparently sound kidneys and was clinically normal except for slight gastric hyperacidity. Two other patients, one a parturient, exhibited symptoms typical of uremia with convulsions, but the chloridemia of the blood kept low, not over 5.5 and 5.9, although the uremia was so extreme that death soon followed.

It is the secondary retention of water that brings on the clinical picture that has been labeled "chloridemia": the edema in the brain and viscera. Treatment should include abstention from salt, but if the urea in the blood is within normal range, and if the phenolsulphonephthalein test shows normal conditions in this line, then the patient can be given milk in increasing doses, gradually resuming fish and meat, merely keeping the salt intake low. Milk is useful on account of its high albumin content and its low salt content. It may seem strange to allow albumin to these patients with convulsions from retention, but, once certain that the blood shows the nitrogen metabolism intact, there is no need to spare it. Holst's clinical success confirms the correctness of his premises.

Retroperitoneal Sarcoma.—Bull's case is remarkable not only in the huge size of the myxofibrochondro-sarcoma but in the smooth recovery after its removal. The first symptoms had been slight abdominal pains, ten years before; the tumor became palpable the sixth year. It weighed 15.5 kg., over 34 pounds, after removal. The patient was a machinist, 54 years old.

Isolated Tuberculosis of the Bladder.—Platou relates that there have been sent in for examination, in the last two years, five kidneys removed on account of tuberculosis which proved to be even microscopically free from tuberculosis. The patients' symptoms had indicated tuberculous disease in one kidney and in the bladder, with tubercle bacilli in the urine. Two of the patients seemed to be cured by the nephrectomy; two others died from the progressive bladder tuberculosis; the outcome is not known in the fifth case.

Colorimeter Determination of Nitrogen in Blood and Urine.—Salvesen's research amply confirms the reliability and simplicity of the Folin-Denis methods for determining the total nitrogen, ammonia and urea in the urine, and the non-protein nitrogen in the blood. He considers them superior to other technic, especially for the urine. The reaction is the change in tint after addition of Nessler's reagent. This is prepared with mercuric iodid and potassium iodid with addition of sodium hydroxid.

Infectious Jaundice.—Nicolaysen remarks that epidemic catarrhal infectious jaundice is comparatively common in Norway, but it seems improbable that it has anything to do with spirochetes or Weil's disease.

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LIVING PATHOLOGY *

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Living pathology is the important contribution of modern surgery to the medical sciences. It is the study of surgical diseases in their various stages of activity, either a return to the normal or the destruction of life, in contrast with dead pathology, which is based on the study of terminal tissue changes after the somatic death of the individual. This study of living pathology, especially in surgical diseases of the abdominal viscera, has banished old misconceptions of their clinical expression, and has given to present day diagnosis a refinement which existed only in our dreams in former days. It has been truly said:

> 'Tis man's worst fault to let the things
> That have been run to waste, and in the
> Unmeaning present sink the past.

The understanding which gives a meaning to present-day surgery has been developed from a knowledge of the faltering steps of scientific progress up to the creation of living pathology. Surgical history may be arbitrarily divided into three epochs. From the dawn of time to the eighteenth century, this ancient art was plied in complete ignorance of the natural processes of disease. While the acumen of observation of our forbears excites our admiration, it does not blind us to the crudity of their empiricism. With the advent of that wonderful transition era, from the darkness of medieval social, economic and moral institutions to the light of modernism, came the emancipation of medicine from the routine and thraldom of authority. To Morgagni, who introduced anatomic and pathologic thinking into medicine, must be accredited honors similar to those accorded the leaders in statesmanship, art, literature and the culture of a marvelous Renaissance. He marks the beginning of the second epoch, the age of dead pathology. The impetus given to clinical medicine by the introduction of pathologic study, together with the continuation of experimental research, begun by Galen to find perfection in Harvey's illustrious work, was such that medicine sought separation from art, its ancient mistress, and became espoused to science, a union that represents the turning point in the development of medicine. Its crowning glory rests with that child of a philosophic mind which the present has christened the living pathology.

The father of this infant prodigy, which in a few years has grown to dominate surgical thought, is Lawson Tait. Observation of diseased processes through the open laparotomy wound enabled Tait to solve the riddle of the so-called broad ligament hematomas, which he discovered were due to extra-uterine pregnancy. In like manner he showed that the numerous infections of the female pelvis were, in the vast majority of instances, secondary to infection of the fallopian tubes, thus supplying the key to what had previously been known only as pelvic cellulitis. As a natural result of Tait's observations it was found that many of these disease processes could be arrested in their trend toward terminal or dead pathology.

John Hunter was undoubtedly the giant intellect of the age of dead pathology, while Lawson Tait merits the honor of having placed living pathology as the foundation of rational surgery. This contribution, together with asepsis and anesthesia, is the Promethean gift of all time to clinical surgery. The leaders in medical science, as in the other sciences, have added luster to their age, not by the elaboration of details, but by the evolution of far-reaching principles, destined to guide practice in many instances through centuries of darkness. This is evident when we recall that ancient medicine was based entirely on philosophic reasoning with its inherent fallacies. With the introduction of experimental medicine and the awakening appreciation of the relative rôles of cause and effect in disease, medicine emerged from behind the dark veil of superstition. For almost two centuries the practice of surgery has been based on knowledge gleaned from the study of clinical symptoms and dead pathology, and the value gained is inestimable. Perhaps two centuries more will elapse before the medical body politic is purged of the false teachings unavoidable in an age so pregnant with colossal truths, but this can neither cast opprobrium on nor dim the luster of an era so wonderful in scientific progress as ours.

When Lister opened the doors of surgical possibility with the golden key of Pasteur's discovery, the new science of living pathology awaited but the master touch of Tait to make it our common possession. Only a few years have passed since then, and "the inaccuracy of thought which may come from a too exclusive devotion to the pathology of the dead" has been displaced in the minds of many by an accuracy born of attention to the pathology of the living. The progressive surgeon of today indulges the hope of that millennium when the symptoms of abdominal disease will create in the mind of every practitioner of medicine the image of living pathology. When that time comes, the phrase of the modern internist may perhaps survive, but only as a curiosity of a dead medical language; the gastro-enterologist, instead of wasting valuable energy and time in the creation of a meaningless terminology, will hasten to the side of the operating surgeon to learn the fundamental truths of living pathologic processes. Teachers of medicine will not indulge

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*Read before the Tri-State Medical Association, Madison, Wis., August, 1918.

in word-pictures painted in the colors of self-delusion; endowed chairs of internal medicine will demand of the incumbent attendance at the side of the surgeon to observe and confirm the primary pathologic processes in the living. Those of you who come face to face with the difficult problems of abdominal diagnosis will bear a lighter burden if you remember the advice of Moynihan when he says: "I would urge on all those engaged in the practice of medicine the desirability of following their patients to the operating table whenever opportunity occurs. The lessons there to be learned will in practice be of a value beyond all reckoning, and interest in the daily work will thereby be quickened to an unaccustomed degree."

Let us consider the development of knowledge relative to the living pathology of that most frequently diseased abdominal structure, the appendix. The suggestion of Grisolle, in 1837, to open and evacuate abscesses pointing anteriorly in the right iliac fossa, was made in ignorance of the origin of the pus. For centuries the pathology of the dead-house has failed to connect the widespread intra-abdominal lesions, to which death is due in appendicitis, with their origin in infection proceeding from that organ, so insignificant in size and so big in anatomic and physiologic importance.

To the acute mind of Reginald Fitz we owe the arguments which turned the blazing light of living pathology on the right iliac fossa, thus dispelling the mystery and revealing the truth. The cecum was cleared of the odium attached to it by the term typhlitis and perityphlitis. The results of early operation demonstrated the appendix to be the starting point of the inflammation of that region. The bacterial origin of the disease was substantiated. The march of infection in all its stages could be seen and understood. Ulceration, gangrene and perforation of the organ and the involvement of the adjacent peritoneum with spreading peritonitis, or the formation of adhesions with the limitation of the infection and the production of periappendicular abscess; all these processes were easily understood by the opportunity afforded to observe active disease processes, which is living pathology.

Not only were the acute conditions resulting from disease of the appendix cleared up, but the frequency and importance of chronic disease became evident. It is now known that the appendix may be the seat of disease without causing symptoms of sufficient moment to excite attention. It is not at all infrequent to find an appendix to have become thickened, scarred or completely obliterated without any knowledge on the part of the patient that he is harboring a diseased organ. We also now know that a diseased appendix may express itself through some other mouthpiece and become confused with organic disease of the stomach or duodenum or the intestines. By reflex action it may cause spastic contractions of the pylorus, pylorospasm, giving rise to symptoms purely gastric in character; or it may affect the secretion and cause the so-called secretory neuroses. Again the peristalsis and functions of the large or small bowel may be disturbed, also by reflex influences, giving rise to decreased or deficient peristalsis, with constipation, flatulence or diarrhea—so-called intestinal indigestion. This appendicular dyspepsia has been well, though incompletely, defined by Mansell as "a group of symptoms and perhaps signs which point so strongly to organic disease of the stomach or duodenum that it is only by a most careful history or by supervention of definite appendicular symptoms that a correct diagnosis is possible."

Furthermore, disease of other viscera of the abdomen are now with increasing frequency being connected with the functional disturbances due to the presence of chronic appendicitis or to a chronic bacteremia or toxemia induced thereby. It is more than a suspicion that gastric and duodenal ulcer, and inflammatory diseases of the biliary and pancreatic ducts, may often owe their origin to a chronically diseased appendix. Tubal disease and sterility of the female also has been shown to be a consequence of appendicular disease in many cases. Although today the advantage of early operative treatment of acute appendicitis is quite generally recognized, we still frequently enough see the results of neglect in acute appendicitis, which, despite a universal knowledge of the disorder, enables it to retain its distinctive "captaincy in the army of death." In acute lesions of the abdominal viscera, however, opportunities to observe the widespread effects of the disease are rare in comparison with our experience of thirty or even twenty years ago. But the reverse is true with regard to chronic inflammatory processes and the less frequent neoplastic diseases of the appendix.

Rarely a day passes without bringing the surgeon the opportunity, by the operative demonstration of a chronically diseased appendix, to dispel the delusion of a subacute gastric or some fanciful upper abdominal neurosis. These are mistakes of interpretation of the language of the living pathology—mistakes which, I regret to say, frequently condemn the sufferer to chronic invalidism or write his epitaph as a martyr to medical procrastination.

The practical value of a knowledge of living pathology lies not alone in increased accuracy of diagnosis, but also in the recognition of certain limitations of diagnostic possibility. It is beyond the power of man to differentiate, in certain instances, chronic disease of the gallbladder, stomach, duodenum, pancreas and appendix. Living pathology has taught us that disease of one or the other of these organs may, and usually does, destroy their harmony of function, and that clinical symptoms are but discordant notes common to disease processes in all. The gastric symptoms of chronic pancreatic lymphangitis, cholecystic and appendicular disease express their effects on the gastric mucosa by the action of toxins reabsorbed from the diseased area by functional disturbances depending on a common nerve supply. So rarely do we fail to find an organic basis for these digestive troubles that dyspepsia as a clinical entity has practically passed into the oblivion of surgical antiquity. It is true that disturbances in the sensory, secretory and motor functions are not infrequently dependent on systemic disease or more rarely on defects in the mechanism of nervous control, but the entire digestive tract must be studied carefully and systematically before gastric symptoms may be attributed to these causes and be termed "idiopathic," a term which, in the great majority of cases, indicates our inability to interpret the living pathology.

I have sometimes been misled to open the abdomen in the presence of predominating gastric symptoms, only to find the pyloric sphincter to be the seat of spasm of toxic or reflex appendical irritation, as evidenced by the complete relief of symptoms following appendectomy. And on more than one occasion I have opened the stomach in search of the local cause of postprandial pain, hyperchlorhydria or pylorospasm, to find disappointment in the presence of a perfectly healthy mucosa. Even hematemesis has been disproved as a symptom of simple ulceration in a number of instances, and found to depend on the toxic effect on the arterioles of the gastric circulation, or of poisons generated in a distant and diseased organ with the production of simple erosion of the mucous membrane, as described by Dieulafoy. Chronic simple ulcer of the stomach and duodenum is believed by Mayo, Robson and others to result from oral and other septic processes, and recently the frequent association of chronic appendicitis with duodenal ulcer has been explained in the same manner.

It is not my purpose to discourage attempts at differential diagnosis, for this is of the utmost importance and, as a rule, possible; but more intelligent by far is the physician who recognizes the voice common to the living pathology of various structures, than he who attempts to localize the trouble to a particular organ, and then attributes it to functional derangement.

Let us consider the influence of our knowledge of the living pathology of the pancreas and biliary passages on the modern conception of their diseases. Bacteriologic investigation of the contents of the diseased gallbladder has clarified our ideas of the origin of cholecystic disease, and the living pathologist traces, in sequential order, the steps in the progress of the disease from the reception of the micro-organisms through the stages of acute and chronic inflammations and their complications, gallstone formation, precancerous tissue changes and, finally, carcinoma. In 1896, Riedel, in operating in a case of gallstone disease, discovered a chronic pancreatitis, which he differentiated from primary cancer of the head of the organ. Since that time the opportunity for observation which has been afforded by surgery has established the fact that the pancreas is frequently the seat of chronic inflammatory alterations. The touch of the surgeon during life has revealed that which postmortem pathology had overlooked. It has been possible to trace the path of infection from the gallbladder through the lymphatics lying in the right free border of the gastrohepatic omentum to the peripancreatic plexus. The lymph nodes clustering about the pancreas may be seen enlarged, and from their anastomosis with the intrapancreatic lymphatics the assumption is fair that the pancreas is not infrequently infected in this manner. To this early inflammatory disease of the organ the name pancreatic lymphangitis has been applied. That it is a precursor of the more serious and pronounced changes in the pancreas there can be no doubt.

This fact of living pathology has supplied us with the key for treatment of this form of pancreatitis through drainage of the biliary tract. When the source of the lymphatic infection is thus removed, recovery of the pancreas is the rule, as has been demonstrated on occasions when subsequent operation became necessary for some other reason, as well as by the subsidence of symptoms after operation.

The early hope of the surgical relief of diabetes, when this condition is secondary to chronic inflammatory processes in the pancreas, has not been fulfilled. Destruction of the islands of Langerhans by cicatricial contraction of inflammatory tissue bespeaks a process too far advanced for relief by drainage. It denotes a parainfectious condition, the terminal change in the surgical conception of a process that probably would have been amenable to operation at an earlier stage, had the physician in attendance heard in the digestive complaints, not the voice of functional disturbance, but an echo of the cry of distant organic disease.

Obstinate constipation is another field formerly considered exclusively medical and beset with unfounded theories, which are now being subjected to the search of the living pathologist. Sir Arbuthnot Lane, who is most active in this work, has described with great plausibility certain mechanical factors in the form of bands and kinks which embarrass peristalsis and give rise to intestinal stasis. Whether or not we are willing to go all the way with him in his ideas, we must acknowledge that there is truth at the bottom of the well and that it will in the end rise and prevail as a result of demonstrations on the living subject.

That duodenal ulcer is today so frequently observed is exclusively due to the necropsy in vivo. Only a decade ago ulcer of the duodenum was considered a rare lesion and its symptoms were parading under many painful gastro-enterological names, such as hyperchlorhydria, gastralgia, chronic gastritis, etc. Gastric ulcer was thought to be far more common than ulcer of the duodenum. Today the order of frequency is reversed, and a typical syndrome of symptoms has been worked out by means of which the more typical cases may be diagnosed with great accuracy. Still there are many ulcers which give but little evidence of their presence and it is easy to overlook the lesion.

If further illustrations were necessary to prove our contention of the radical difference between living and dead pathology, we need but to contrast the postmortem records of any large hospital with the clinical statistics based on operative findings. Search the records of any pathologic laboratory, and you will rarely find an instance of peritonitis secondary to a perforation of a chronic calloused ulcer of the duodenum. Yet it has been our privilege to operate on fifty-two patients during the past ten years with this alarming complication of ulcer, and we have had fifty recoveries.

As another example, I will mention that instances of death from calculous obstruction of the common bile duct are rare in hospital records. Would not clinical teaching based on records be highly erroneous? The practical significance of the matter is that numerous patients, as a result of these conditions, die outside of the hospital, and that the few are saved by following the advice of an intelligent physician who, cognizant of the living pathology, realizes the necessity of immediate surgical consultation. Furthermore, bacteriologic study, in cases of ruptured gastric and duodenal ulcers, has taught us that during the first twelve hours the peritoneal fluid frequently is sterile, and in this we find the reason for the almost perfect success in early operative interference. This early sterility of the extravasated fluid enables us not only to undertake closure of the perforation, but also plication of the duodenum and posterior gastro-enterostomy as well, procedures that in the great majority of cases relieve the patient of future ulcer trouble and offer an assurance of operative success almost equal to the certainty of death when, after the lapse of a few hours, the peritoneum has become infected. The profound predisposition to cancer of a chronically ulcerated area of the pyloric antrum is one of the startling facts exposed to the light of day by the aseptic scalpel.

Knowledge of the cellular pathology of neoplastic tissue removed at operation has completely rearranged our ideas of cancerous change, and forms the basis of the only rational treatment—early and radical excision of ulcers. The microscopic demonstration of the very earliest malignant changes in the bases of chronic ulcers of the stomach in association with precancerous inflammatory tissue has added the necessity of excision of areas of potential carcinoma. Indeed, this relationship has been so definitely proved that it is the aim of every surgeon whose judgment is based on living pathology to prevent the necessity of radical operations on the uterus, stomach, breast and other organs by the early recognition of malignant degeneration of primary benign tissue changes.

May I venture to call attention to another of the contributions of living pathology toward the saving of human life? This relates to our present knowledge of renal tuberculosis. Formerly, when death occurred from tuberculosis of the kidney, it was the rule for advanced tuberculous processes to be found elsewhere. Very frequently both kidneys were involved and, as a rule, the bladder showed extensive tuberculous ulceration. By the study of renal tuberculosis in motion, several important facts have been apparent: First, that tuberculosis of the bladder is never primary, but always secondary to disease of the upper urinary tract or of the genital tract, and that it most frequently follows infection of the kidney. Second, it has been found that in the beginning surgical tuberculosis of the kidney is usually unilateral. Disregarding the abstract question of whether the infection be distinctly primary or whether it be secondary to tuberculosis of some *other portion* of the body, it is true, at least, that the renal lesion may be the only active focus of tuberculosis in the body. This knowledge has led to nephrectomy for renal tuberculosis, by which many lives have been saved.

We could multiply examples in the citation of various surgical diseases of the abdominal viscera to illustrate the contributions of living pathology to a clearer understanding of conditions which so frequently manifest themselves through the medium of gastric symptoms, but I trust enough has been said to give you a glimpse of the pathway of progress.

Only by standing at the elbow of the surgeon, let me repeat, can the internist hope to attain proficiency in diagnosis and the proper conception of treatment in these conditions. Observe that I say the elbow of the *surgeon*, not the operator, for there is a sharp distinction between the mechanical practitioner of surgery and the true surgeon, who is a specialist, not in operating, but in the field of surgical disease, skilled in diagnosis and prognosis, aware of the dangers and limitations of his art, and as ready to withhold his hand at the bidding of science and conscience as he is bold to attack the condition which, unchecked, threatens the patient's welfare.

A duty, says the poet, is a demand of the hour. The duty of the general practitioner is recognition of the advantages of studying the living pathology and a willingness to employ every means to this attainment. To those whose symptomatic treatment of surgical disease is gilded with the self-delusion of rationality, I would commend that sublime utterance of Polonius:

> This above all: to thine own self be true,
> And it must follow, as the night the day,
> Thou canst not then be false to any man.

ACUTE NEPHRITIS

A STUDY OF FORTY-FIVE CASES

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This paper is based on the study of forty-five cases of nephritis occurring on the medical service of base hospital No. 108 at Mesves hospital center, France, during the winter of 1918-1919. About half of the patients were in our own hospital while we were doing routine urine examinations on all patients. With one or two exceptions, none of these men complained symptomatically, and all undoubtedly would have been sent back to duty except for the discovery of albumin, casts and blood in their urine. All cases sent to this hospital were convalescent from some disease or wound and were supposedly on the road to recovery. The other half of our nephritic cases were transferred from other hospitals in this center, and most of them had shown symptoms of nephritis, a few even having had convulsions. Combining the two groups gives us a series of cases varying from the mildest to the most severe.

It was impossible to do any blood-chemical work, or in fact any clinical work except the simplest. We were anxious in our work to determine, if possible, first, the etiology of a nephritis occurring at an age usually free from such a condition, and secondly, the prognosis. Have we any means of determining which cases, if any, will clear up completely, leaving the kidney practically undamaged, and which cases will continue and finally terminate in a chronic nephritis or death? Of course too short a time has elapsed to make any positive statement, and we can only report which cases on discharge showed a urine of good specific gravity, free from albumin, casts and blood, normal blood pressure and no symptoms. We have, however, taken the names and addresses of all these patients, and hope to be able to follow them in the future and determine the ultimate outcome.

ETIOLOGY

Of forty-five cases, eleven gave a history of probable kidney disease in their immediate families. This does not seem to be above the average when we consider how common a condition nephritis is. Dividing the series roughly into two groups, graded as to severity, the first group showing dyspnea, headache, edema and marked urinary findings, the second group showing few or no symptoms except the urinary findings, we found that seven (35 per cent.) out of twenty in group one gave a positive family history, while only four (16 per cent.) of twenty-five in group two were positive. It would thus seem that a patient with a positive family history was a little more apt to develop a severe case than one whose family history was negative.

In taking the past history the following diseases were particularly inquired into: scarlet fever, smallpox, diphtheria, malaria, typhoid fever, pneumonia, pleurisy, tonsillitis, rheumatism and venereal disease. No particular effort was made to determine the history as regards tobacco and alcohol. In a general way it may be said these patients drank very little and smoked a good deal. Of forty-five patients sixteen (35 per cent.) gave a history of tonsillitis, a high percentage, but to be expected when we consider how common a disease tonsillitis is. Twelve (27 per cent.) of these patients gave a history of typhoid fever and this rather surprised us, as it must mean that typhoid is or has been a very common disease in the United States, or else that this group shows an unusually high percentage, and we may consider its occurrence as predisposing in some way to a later nephritis. In this connection another interesting point comes up: All these soldiers had been vaccinated against typhoid. Their urine was examined as they entered the Army, and they then received the vaccine, but their urine may not have been examined again until they were sent to a hospital for some wound or illness. It would be interesting and might prove valuable to examine the urines of a thousand men before and just after receiving their typhoid inoculation, and determine whether there are evidences of kidney irritation which might account for some of the well known symptoms of reaction, and also for this later development of an acute nephritis when an unusual strain is thrown on a slightly damaged kidney.

There were seven cases of rheumatism, four each of malaria, pneumonia and diphtheria, and three each of scarlet fever and smallpox. One patient gave a history of syphilis with a negative Wassermann.

At the suggestion of Lieut. Horace Gray, M. C., who was making a study of similar cases at Vichy, and who kindly came up to Mesves to compare notes and to give us the benefit of his experience, we went into the question of salt and meat consumption. Of forty patients, twenty-four (60 per cent.) said they customarily took more salt than normal persons, and twenty-eight (70 per cent.) ate more meat. Of fifty normals, mostly patients in the same ward, thirteen (26 per cent.) said they thought they ate more salt and meat than was usual. There is therefore a possibility that excessive consumption of salt and meat may have an etiologic bearing on the development of the disease.

RECENT HISTORY

It was our first idea that the immediate cause of admission to the hospital, influenza, pneumonia or gunshot wound, might be the exciting cause of the nephritis in a patient particularly susceptible, but careful questioning brought out the fact that practically all these patients suffered from some symptom, nocturia, dyspnea, headache, or even edema, before the onset of the condition which caused their admission to a hospital. In some of the cases, of course, the patient was admitted for his nephritis and in these no antecedent history of disease could be obtained as a rule. At Lieutenant Gray's suggestion we made a special effort to obtain a history as to the occurrence of diarrhea, and found such a history in fifteen (37.5 per cent.) of forty patients questioned. But it must be born in mind that diarrhea is a very prevalent disease at the front, and the great majority of soldiers have it at some time. Several of our patients stated definitely that they alone of their entire platoon or company escaped without having it, so to our minds diarrhea as an etiologic factor is of doubtful importance. Some of these diarrheas were undoubtedly a streptococcic infection, and theoretically there is no reason to believe that they could not cause a nephritis as easily as a streptococcic throat infection could. Throat cultures of twelve patients gave two positive for streptococcus hemolyticus, not more than one would expect to find in normal individuals.

We were finally compelled to fall back on the hypothesis that the attack was due to exposure to dampness and cold, insufficient nourishment and excessive physical and mental strain, to which the men were occasionally subjected, factors quite foreign to their ordinary civil life.

The earliest symptoms complained of were, as a rule, nocturia and dyspnea. Headache was a rarity and in not a few patients the first thing noticed was edema of the face or feet. A most typical case was that of one of the cooks of our organization, who had been on night work (but otherwise had suffered no hardships at all), and who came in simply because he felt tired and wanted a few days' rest. His urine showed a large amount of albumin, with red blood cells and casts. Tracing some of the histories back, it was surprising to find that some of these men had gone through a month or two of arduous field service while they undoubtedly had their nephritis. Two of the patients had convulsions (both of these cleared up entirely).

PHYSICAL EXAMINATION

This showed diseased tonsils in eleven cases, and pyorrhea or bad teeth in nine. The heart was normal in forty-one cases and normal except for accentuated aortic second sound in four more.

The Wassermann test was negative in forty cases, plus minus in three and one plus in two. None were two plus. Certainly syphilis cannot be considered an etiologic factor. Furthermore, these findings tend to make one disbelieve newspaper tales to the effect that the American Expeditionary Forces are especially subject to venereal disease.

Eye examination revealed the fundus normal in forty cases, with slight changes in two. No case showed any hemorrhages.

Blood pressure was taken on admission and then at intervals varying from one to seven days. Of forty-four patients, nine had a systolic pressure above 160 when it was first taken and thirteen had a diastolic pressure above 90. All of these thirteen cases came in the group of severely ill, and it seemed to us the determination of the diastolic pressure was of the utmost importance in judging the gravity of the condition. In one case in which the patient was bled (in another hospital) the blood pressure fell from 200 systolic and 120 diastolic to 150 systolic and 110 diastolic, with marked improvement in the patient's condition. In not a single case did the blood pressure fail to fall to normal or below after rest in bed and restriction in diet.

At the suggestion of Lieut.-Col. Elliot P. Joslin, M. C., medical consultant of the center, two-hour renal and phenolsulphonephthalein tests were done in all cases and the results are listed in Table 1. The following description of the two-hour renal test and the grading of the phenolsulphonephthalein output is taken from an article by Capt. Warren T. Vaughan, M. C.[1]

Patients were given their ordinary amount of food and liquid at the accustomed time of day, but no fluid was allowed after the evening meal (about 5 p. m.). This restriction was difficult to enforce, and we are not sure the men did not occasionally get some fluid. However, our water was all chlorinated, and the men drank very little of it; nor was water very plentiful, so that we do not think the error here was considerable. Another point to be considered is that the men received coffee two and sometimes three times a day. In a way, these two factors are on opposite sides of the scale and would tend to balance. At the noon meal each man received a teaspoonful of salt, distributed as he pleased. At 7 a. m. on the day of the test each man voided and discarded the urine. Then he voided at 9 a. m. and every two hours up to 7 p. m. The quantity and specific gravity of each of these specimens were determined. The entire night urine from 7 p. m. to 7 a. m. was saved as one specimen, and the quantity and specific gravity were likewise determined. Normally the specific gravity should be at times above 1.018, particularly after meals. With the specific gravity constantly below 1.018 there is present "fixation of specific gravity." There should be some definite variation of urinary volume among the two-hour specimens. The night specimen, including the 9 p. m. and 7 a. m. voidings, should not measure over 400 c.c. in volume, and its specific gravity should be 1.018 or above.

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[1] Vaughan, W. T.: J. Lab. & Clin. M., June, 1918.

TABLE 1.—SCALE FOR MEASURING DEGREE OF IMPAIRMENT OF RENAL FUNCTION

		Night Urine		Variation in Sp. Gr. when Highest Is			
		C.c.	Sp. Gr.	18	17-15	14-13	12
Normal..........	0	400	18+	9+			
Slight..........	+	401-600	16-17	8-5	6+		
Moderate........	++	601+	15—	4—	5-4	6+	
Marked..........	+++	....	.....	3—	5-4	6+	
Maximal.........	++++	....	.....	...	3—	5—	6+

+ means plus or more.

PHENOLSULPHONEPHTHALEIN TEST

One c.c. of phenolsulphonephthalein was injected deep into the lumbar muscles, the patient first having voided urine and drunk two glasses of water. The urine was then voided at the end of one hour and two hours, the amount of phenolsulphonephthalein excreted in each specimen determined, and the results added together. While anything over 50 per cent. is usually considered normal, for the sake of uniformity in comparing with the two-hour renal tests and our clinical grading we have again followed the scheme of Captain Vaughan and considered an output of 0 per cent. to 10 per cent. as ++++; 11 to 24 per cent., +++; 25 to 39 per cent., ++; 40 to 59 per cent., +; and above 60 per cent., 0.

Clinically we graded our cases on admission and on discharge in four classes: (1) those that were normal, or 0; (2) cases showing no symptoms, but a little dyspnea and few urinary findings, or +; (3) cases more marked with dyspnea, edema, high blood pressure, etc., or ++ and +++; and (4) those cases in which there were convulsions, or ++++.

In Table 2 we give the case number, clinical condition on admission, blood pressure on admission, first two-hour renal test, first night test, second two-hour renal and night tests, first and second phenolsulphonephthalein tests and clinical condition on discharge. The first two-hour renal and phenolsulphonephthalein tests were made as soon after admission as possible, and generally within three days, and the second two-hour renal and phenolsulphonephthalein tests were made after from one to three weeks. Theoretically these various tests should correspond to some degree: that is, if the first two-hour renal test shows ++ the first night, the first phenolsulphonephthalein test should be about ++. If the patient improves, the second two-hour renal, night and phenolsulphonephthalein tests should improve to about the same degree, but we find this true in very few of the cases, and in some the discrepancies are marked. For example, in Case 5, clinically + on admission, first two-hour renal ++++; first night ++; second two-hour renal 0; second night +++; phenolsulphonephthalein 0; clinically on discharge 0. Case 7 shows much the same discrepancy. Case 9 shows two normal two-hour renal tests with two night tests of ++ and +++. In Case 13, *the patient*, clinically a severe nephritis on admission and discharge, gave two normal two-hour renal tests and two night tests of +. Both phenolsulphonephthalein tests showed +. Case 41, in which the patient died, gave four normal two-hour renal and night tests, but the phenolsulphonephthalein tests were ++++ and +++.

TABLE 2.—RESULTS OF TESTS

No.	Clin. Adm.	Blood Pressure	1st 2-H.	1st N. T.	2d 2-H.	2d N. T.	1st PH.	2d PH.	Clin. Disch.
1	2+	190-110	4+	4+	2+	4+	2+	+	+
2	+	118- 74	+	+	0	+	0	...	+
3	3+	170-100	0	0	0	2+	0	...	0
4	+	114- 74	0	2+	0	3+	+	0	+
5	+	110- 80	4+	2+	0	3+	0	...	0
6	+	120- 60	+	3+	0	0	0	...	+
7	+	128- 68	+	3+	0	4+	2+	0	0
8	2+	128- 66	0	0	0	0	+	...	0
9	+	128- 90	0	0	0	3+	+	...	0
10	2+	130- 68	2+	3+	4+	4+	2+	+	+
11	+	168- 90	0	2+	0	4+	+	...	0
12	+	120- 80	0	+	0	0	0	...	0
13	2+	160-100	0	+	0	+	+	+	2+
14	+	130- 70	0	+	0	+	0	...	+
15	+	116- 64	0	0	0	0	0	...	0
16	+	120- 64	0	+	0	2+	0	...	+
17	+	140- 90	0	0	0	0	...	...	+
18	+	136- 90	0	+	0	0	...	...	0
19	2+	130- 65	0	0	...	...	2+	0	0
20	2+	105- 60	2+	2+	0	...	3+	+	2+
21	2+	110- 65	0	0	...	...	0	...	2+
22	4+	220-120	0	3+	0	+	0	...	0
23	+	110- 65	0	0	...	...	0	...	+
24	3+	210-160	+	+	+	0	2+	+	+
25	2+	120- 65	0	0	0	...	...	...	0
26	2+	158-110	2+	3+	3+	3+	2+	3+	2+
27	2+	180-120	3+	0	+	+	2+	+	+
28	+	160- 80	4+	4+	4+	4+	2+	2+	2+
29	3+	165- 85	+	3+	4+	4+	4+	3+	+
30	+	125- 85	0	0	0	...	+	0	+
31	+	95- 55	0	+	0	...	+	...	0
32	+	136- 75	4+	3+	...	...	+	0	0
33	2+	140- 92	0	+	0	0	2+	0	+
34	2+	164-100	0	0	0	+	0	0	0
35	4+	150-100	0	0	0	0	+	0	0
36	+	135- 66	...	...	...	...	0	0	+
37	+	120- 75	0	4+	0	3+	+	+	0
38	3+	168-116	0	0	+	3+	+	2+	+
39	+	....	0	...	...	...	...	...	+
40	+	100- 70	+	0	0	0	0	0	+
41	3+	160-100	0	0	0	0	4+	2+	Died
42	+	120- 66	0	0	0	0	+	2+	0
43	+	164- 98	0	0	+	+	0	0	0
44	+	126- 56	0	+	0	4+	0	0	0
45	3+	150-100	0	4+	+	3+	0	0	+

Our final conclusion was that, while both tests were of value in prognosis, the phenolsulphonephthalein test is superior for the type of nephritis we were studying, both as regards ease of administration and accuracy. In the latter test the patient has nothing to do, and cannot spoil the result by carelessness or design, while in the two-hour renal test he can make the entire conclusion of no value by disobedience of orders, such as drinking a glass or two of water at night, or by discarding some of the urine which should be saved. It is very probable that the two-hour renal test is of more value in cases of chronic nephritis than in the type of cases we were studying. The phenolsulphonephthalein test we both felt was extremely valuable, and several times it enabled us to give favorable prognoses in cases that clinically appeared almost hopeless. This was particularly true of the patients represented in Cases 3, 22 and 35, all of whom appeared extremely sick on admission, but gave good phenolsulphonephthalein outputs, and eventually were discharged as clinically well. Improvement in the second phenolsulphonephthalein output over the first generally coincided with improvement in clinical appearance.

In general we would say that both tests should always be used and can be used by every practitioner, as they require no complicated apparatus nor laboratory training. An outfit for doing the phenolsulphonephthalein test can be purchased for about $50, and the two-hour renal test requires only a urinometer. In the case of the two-hour renal test great precaution should be taken to follow the rules exactly, as an unintentional slip on the part of the patient may lead to serious error in the interpretation of the results.

TREATMENT

Patients were kept in bed, as far as possible, as long as their urine showed much albumin. They wore flannel pajamas and slept between blankets instead of sheets. One end of a hundred-bed ward was partitioned off and several stoves were put in, an endeavor being made to keep this ward warm and at an even temperature. If a patient's urine cleared up entirely and he seemed well he was transferred to the main ward, put on regular diet and allowed out of bed. A careful check was kept on his urine, and at any sign of recurrence he was put back in the nephritic ward. It may be said here that recurrences were rare, and that once a patient recovered from his attack he seemed to do well.

All patients were put on a quart of lemonade without other food or drink the first day they were in the ward. If they presented edema or marked symptoms this treatment was continued for a further period of twenty-four hours. A few of the patients with high blood pressure or marked dyspnea or edema were bled from 16 to 20 ounces with marked relief. Bowels were, of course, kept freely open.

Diet.—It was possible to have a special-diet nurse for the ward, and as nearly as possible patients were given a salt-free diet. Fluids were restricted to about 1,000 or 1,200 c.c. in the twenty-four hours. No meat was given, but occasionally the patients who were improving rapidly received an egg several times a week, or a little chicken. With eggs at twenty cents apiece they did not enjoy this luxury often.

RESULTS

Most of the patients were transferred before any final result could be definitely determined, as every effort was made, as soon as they could travel, to have them sent home, where they could be treated under better climatic and hospital conditions. The majority of the patients stayed from a month to six weeks, and in that time twenty were discharged as apparently perfectly well, nineteen showed traces of albumin and casts in their urine without any other symptoms or clinical signs, five were improved, but showed quite evidently that they still had a serious kidney condition, and one patient died.

Necropsy on the patient that died, performed by Lieut. Wann Langston, M. C., chief of the laboratory, revealed: Kidneys: Normal in size, dark, mottled, capsule stripped easily, cut surface did not bleed, markings indistinct. Microscopic: Glomerular changes not marked; moderate congestion of intertubular capillaries; cloudy swelling and desquamation of tubular epithelium; edema; intertubular hemorrhages. Diagnosis: Acute diffuse nephritis.

CONCLUSIONS

1. The etiology of this acute nephritis is unknown. It seems to occur more often after typhoid fever, and in people who eat too much salt and meat.
2. The blood pressure was usually not markedly increased, and fell to normal after rest in bed. A high diastolic pressure meant a serious condition.
3. The two-hour renal test was of less value in this particular type of case than the phenolsulphonephthalein test. The latter was of distinct value.
4. Apparently most of these patients will recover completely.
5. We considered the restriction of intake to a quart of lemonade, the bleeding, and the rest in bed on a salt-free diet of great value.

EXPERIENCES IN FRANCE WITH SURGERY OF THE GENITO-URINARY TRACT *

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The object of this paper is not to review the literature nor to attempt any general discussion of how wounds of the urinary tract should be or have been treated. Rather, it is to give a notion of the frequency or the infrequency of gunshot wounds of the urinary tract in war, and to report some personal experiences. These are relatively few in number, yet, supposedly, I was fortunately placed for seeing such work. For well over a year, I was with the British army, as a member of the U. S. Base Hospital No. 2, engaged in general surgery, but was also given the care of all genito-urinary conditions that were admitted to the hospital. (No venereal cases were included, as these were treated in special hospitals in the British army.) Two months were spent operating in British casualty clearing stations (advanced hospitals) during periods of military activity. In September, 1918, I was transferred to an American hospital center, as consultant urologist. This was in accordance with a plan which was formulated in the American Army, to assemble the injuries of the genito-urinary system under the care of urologists, at as early a time as possible.

I was sent first to the Mars-sur-Allier hospital center, then to the center of Mesves. The hospitals at the latter place were all taxed beyond their crisis expansion during the latter months of the war, and the proposed segregation of urologic patients in one hospital of the group could not be carried out during this rush period. The demands of general surgery were obviously of first importance in this crisis, and were so urgent that I could personally follow with any degree of care only such urologic patients as were placed in Base Hospital No. 67, where I was in charge of the surgical service.

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INFREQUENCY OF WOUNDS OF URINARY TRACT

I am impressed with two facts concerning war wounds of the urinary tract—the relatively small number of cases in the hospital and the high mortality of these. The relative rarity of kidney and bladder lesions is perhaps explained by the obvious possibility of frequent fatal hemorrhage following wounds of these parts. Various groups of statistics show the kidney involved in from 4 to 9 per cent. of penetrating abdominal wounds, and the bladder in from 4 to 7 per cent. But the number of men with abdominal injuries who live to reach a hospital is only a small fraction of the total number admitted. I have no reliable figures to offer on this point. One American surgeon, in a general operative experience extending over five months in the front area, met with but a single kidney wound, a slight tangential one, and only one of the bladder. Another, whose evacuation hospital work totaled four hundred cases, including a good share of abdominal work, found no wound of either bladder or kidney; and my experience and that of many others were similar.

REPORT OF CASES

In the cases in which I operated at the front, were two gunshot injuries of the lower genito-urinary tract of unusual interest:

The first was a man with machine-gun bullet wounds, the entrance being in the left buttock and the exit in the right wall of the scrotum. In its course, the bullet had completely divided the bulbous urethra, and perforated an old right-sided hernia; this explained the presence of a mass of omentum protruding from the scrotal wall. The cord and testicle were uninjured. The patient had not tried to urinate. Nevertheless it seemed extraordinary that no swelling, induration or ecchymosis was present in the perineum. The urethral lesion was diagnosed by the patient's inability to urinate and my inability to pass a catheter. Operation was performed eight hours after the wound was received. The injured omentum was excised and the hernia repaired. Then, through a perineal incision, an end-to-end suture of the urethra was done, and perineal drainage established proximal to the suture line. The subsequent course was entirely satisfactory up to the fifth day, when the patient was evacuated to the base. As I have heard of two similar cases in which the surgeon felt satisfied with simple drainage of the bladder, I emphasize the importance of immediate suture of urethral injuries, when possible. The results would probably be excellent in many cases, and at the worst the resultant scar would be smaller following suture than would be the case otherwise.

The other soldier referred to also had received a machine-gun wound. The bullet had perforated the posterior muscles of the left thigh and entered the left scrotum. The scrotum was large and edematous, particularly on the right side; a firm elliptical swelling was present in the right inguinal region. No roentgen-ray examination had been made. The general condition was good and no pain was complained of. An injury of the right spermatic cord was diagnosed, and the incision was made over the inguinal swelling. The cord was nearly an inch in diameter. During its dissection, the machine-gun bullet popped out from the depths of the wound and was followed by a gush of blood, which was temporarily stopped by direct pressure. It was then found that the hemorrhage could be perfectly controlled by pressure over both external iliac and femoral vessels, above and below the site of hemorrhage, but not by pressure at either point alone. The incision was extended upward and outward and the external iliac vessels were exposed extraperitoneally. Both artery and vein were found to be nearly severed, and the two ends of both vessels were tied. Following this, the right cord and testicle were removed, and the skin closed with drainage. At the end of thirty-six hours, the general condition was excellent, pulse practically normal, the leg and foot were warm and presented no edema, and the patient was evacuated because of the urgent need of beds.

At the base hospitals, as would be expected, the proportion of urinary wounds was even smaller than in the hospitals of the forward areas. At the Mesves hospital center, early in November, 1918, the number of patients in hospital at one time totaled nearly 23,000. Yet it is worthy of note that I did not see and, in response to direct questions put to the chiefs of all the surgical services, did not learn of a single wound of the kidney at this center.

The only record I have of a case of war wound of the kidney seen before nephrectomy is the following:

The patient, an old English soldier, had received a perforating shell wound, the entrance being in the upper left quadrant of the abdomen and exit to the left of the midline posteriorly. According to the field card, a transfusion of blood had been given at the casualty clearing station and the kidney explored the next day. A hole was found in its cortex, and a fracture of a vert[illegible]ocess noted. The wounds of entrance and exit were [illegible]nd the kidney was drained. No abdominal explorati[illegible]een made. Five days after operation, the man rea[illegible] a very bad condition, with a profuse discharge of [illegible]rough the loin. General supporting treatment and care of the wound were given. Five days later—eleven [illegible] after injury—there was a sudden, severe pain along [illegible]eft costal border, accompanied by great respiratory distres[illegible] vomiting. When seen by the officer of the day, the pa[illegible]t was pulseless. There was slight improvement during [illegible] day, only to be followed by a similar attack which en[illegible] in death. Necropsy disclosed an abdomen filled with blood, the spleen very adherent to surrounding tissues, and a third of it torn nearly free from the rest of the organ. Evidently this rupture had been caused by the original injury; there had been profuse bleeding at the time, and a fresh hemorrhage occurred eleven days later.

The one instance of ureteral injury seen was in a Frenchman, who had been shot in the back above the right costal margin. He came to us classified as a chest injury, but examination showed neither chest nor abdominal signs. Hematuria was the only pathologic finding other than the wound of entrance. Cystoscopy proved the blood to come from the right ureter, but a ureteral catheter passed up to the renal pelvis gave a perfectly clear urine, free from blood. Hematuria continued for some days in decreasing amounts, and finally disappeared. In the absence of any signs of urinary infiltration or ureteral obstruction, no abdominal exploration was performed. However, a machine-gun bullet was discovered by roentgen ray in the bony pelvis and could subsequently be felt through the rectum. It was better located by further radiographic and fluoroscopic examinations, with a roentgen-ray catheter in the ureter, and a palpating finger in the rectum moving the bullet. The removal of this foreign body was easily accomplished through a lateral rectal incision.

MORTALITY OF WOUNDS OF URINARY TRACT

As stated above, in this war the mortality of patients with wounds of the urinary tract has been very high. A recent French publication, giving collected statistics, states that noncomplicated bladder wounds have resulted in a mortality of 56 per cent., and of fifteen cases with coexisting intestinal wounds, only one lived. I have records of eleven patients who reached base hospitals with wounds of or adjoining the bladder, and to my knowledge at least six of them died.

As will be seen from the following reports, not only are intraperitoneal and pelvic complications accountable for the heavy mortality of bladder cases, but wounds in other parts of the body handicap the patient seriously, and materially reduce his chances of recovery.

Of four patients wounded through the perineum, only one recovered. In one of the fatal cases, the urinary fistula, which was demonstrated to come from the bladder, healed promptly after perineal section. But there were other wounds, and later operation was required on an infected knee and on pyemic abscesses of the back and shoulder. Necropsy revealed acute vegetative endocarditis but no infection of the kidneys. Another patient in this group had received a through-and-through wound of one buttock, with comminuted fracture of the sacrum. An extensive débridement had been done at the evacuation hospital. On admission to the base hospital, there was a large tangential wound 8 inches long, with the lower rectal wall fully exposed. Neither feces nor urine leaked from the wound, and there was no further operation done except a revision of the wound with removal of loose fragments of bone. The man died about six weeks after injury. Marked infection of the bladder and ureters and double pyelonephritis were found, but there was no peritonitis.

TREATMENT OF SUPRAPUBIC WOUNDS

Speaking now of suprapubic wounds, I think it advisable, as a rule, to close a bladder wound occurring on the peritoneal surface, but to drain an extraperitoneal opening. A deviation from the latter part of this rule may impair the patient's prospects, as the two following records well illustrate:

One man reached us nine days after being wounded. A bullet had entered the right buttock and had been removed from just under the skin of the right groin. The field card noted that two bladder perforations had been closed by suture and a catheter placed in the urethra and allowed to remain three days. According to the patient, he later voided voluntarily, but the urine had always been bloody after the day of operation. On the train, en route to the base hospital, there was acute retention. The patient arrived in great distress, with his bladder full of blood clots. These were removed by a suprapubic operation under procain. There was found a perforation of the posterior bladder wall in the midline just above the trigone, from which oozed a little blood, not sufficient to require ligature or suture. A suprapubic tube was left in situ for five days, then a urethral retention catheter was employed. Subsequent recovery was uneventful.

The other man referred to had sustained a penetrating machine-gun wound of the abdomen. Two bladder wounds, one intraperitoneal and one extraperitoneal, and a wound of the ileum had been repaired at the evacuation hospital. A urethral retention catheter was tried for four days. In the meantime urine leaked suprapubically; finally the bladder was opened wide. The patient entered the base hospital twelve days after operation with a very dirty, sloughing wound. Special attention was paid to this case in an endeavor to get ahead of the infection, and we were quite at a loss to explain the rapid failure of the patient. Postmortem plastic peritonitis was found, tightly binding together the contents of the lower half of the abdomen; and fully two thirds of the bladder was necrotic.

The importance of removing all loose bits of bone in complicating fractures of the pelvis was especially impressed on us in two instances. The first patient had received a gunshot wound of the bladder, with fracture of the pubic ramus, and other wounds of the right thigh. Suprapubic drainage had been established and bone removed from the bladder at the evacuation hospital. The subsequent history was a long one. The patient was admitted to us in a very weakened state, and continued so to the end. With a retained urethral catheter, the bladder closed in about a week, but marked pyuria persisted. Nothing was gained from a cystoscopy, unsatisfactory because of poor lighting. There was pain only on coughing or on movement of the body in bed, and this was always referred to the pubic bone, the site of the fracture. Abdominal examination was hardly suggestive, and we failed to recognize during the life of the patient the presence of a deep pelvic abscess containing fragments of bone and draining into the bladder.

A parallel case was found a few weeks later. A bullet had entered above the symphysis, and at the forward hospital had been removed from the right buttock by incision. On operation we found an infected hematoma at the right of the bladder and in the space of Retzius. Bits of bone lying free or loosely attached to the pubic ramus were removed. Drainage was established, and convalescence progressed rapidly.

Penetrating buttock wounds are notoriously full of grave possibilities, one of which is a bladder or ureteral injury. However, I recall no such case discovered in the life of the patient, and in none of the several postmortem examinations showing severe pelvic infection was I convinced that this had originated in the urinary tract. Although I saw a number of simple fecal fistulas, I met with no fistula involving both urinary and intestinal tracts. A stricture of the prostatic urethra was found in a man with a fractured pelvis due to crushing, and a number of small wounds of the external genitalia, or healing wounds following orchidectomy performed elsewhere, were seen from time to time.

The bladder complications of gunshot wounds of the spine have interested urologists very much. The behavior of the bladder varies greatly in different instances, but there is usually a period of retention before incontinence sets in; and different devices have been employed to overcome the retention. We had about eighteen or twenty such patients, and tried, in different instances, infrequent catheterization, suprapubic drainage in some persistent cases, and the do-nothing plan so strongly advised by some English surgeons. The last I am convinced is not of universal application, but it is probably the ideal treatment when it can be borne, depending as it does entirely on the overflow drainage of the bladder. Any harm done to the kidneys by a continuously large amount of residual urine in the bladder probably represents a smaller risk than that of urinary infection from repeated catheterization. The rapidity with which infection following catheterization in spinal cases may travel is illustrated by one of our patients, who died twenty-four days after receiving a severe wound of the fifth lumbar and first sacral regions. There was gangrene of the bladder and ureteral mucosa and marked infection of both kidneys.

A number of cases of urinary calculus, perinephritic abscess, genital tuberculosis, torsion of the cord, and a group of less important "civil" conditions were met and treated by operation. The subject of hematuria as found in soldiers was of great interest, and many cases were investigated with the cystoscope. It was amazing that over 90 per cent. of them represented types of what is rather loosely termed "war nephritis." But that discussion will be taken up elsewhere.

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EARLY DIAGNOSIS OF ACUTE ILEUS

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While the diagnosis of ileus due to strangulated hernia is usually made almost at a glance, there are frequently well developed cases of ileus from bands and kinks, intussusception, volvulus and mesenteric thrombosis which are not easy to recognize in their early stages. The classic signs of abdominal pain, nausea and vomiting, tympany and stoppage of the bowels are frequently lacking, and the medical attendant must make an early decision whether or not laparotomy should be performed.

There frequently is no pathogonomic sign to aid in the diagnosis, and this is especially true of that form of adynamic ileus due to mesenteric thrombosis. In this condition, abdominal distention is the only sign during the early stages. The patient did not complain of pain, because of the absence of the violent peristaltic assaults on the obstructing element, so strikingly demonstrated when the muscular waves are suddenly arrested at the site of a strangulated hernia or intussusception. The whole bowel included in the thrombosed arc is in a state of flaccid paralysis, and is incapable of peristalsis. Distention of the bowel results from the loss of tonus in the intestinal muscles and from the gases generated by the putrefaction of the intestinal contents consequent to the stasis. As time goes on, and the element of peritonitis is added, the condition becomes an abdominal crisis, and there is no hesitancy in advising immediate laparotomy. It is necessary, therefore, to reach an early decision as to operation before the pathologic changes become so developed that a diagnosis is rather forced on the physician than reached as the result of an early appreciation of the morbid sequence. Unlike adynamic ileus, the obstruction resulting from a mechanical obstruction to peristalsis and to the onward passage of the intestinal contents, in the vast majority of cases manifests itself by symptoms corresponding in intensity to the degree of obstruction. The rule is, that in those cases in which the stoppage is instantaneous and complete, the patient suffers violent abdominal pain followed by reflex nausea and vomiting. Abdominal distention follows in a few hours, and in many instances peristaltic waves may be observed, beginning on the left side of the abdomen and coursing toward the right, becoming arrested at the point of obstruction. This sign in itself is pathognomonic.

ILLUSTRATIVE CASES

The following cases illustrate the difficulties of diagnosis in the early stages of these two types of obstruction and the necessity of early operation:

Case 1.—*Mechanical ileus with gangrene of 30 inches of the bowel.*—Lieutenant H., admitted to the Medical Service of Major J. N. Hall, Camp Logan, Houston, Texas, had been operated on about one year previously for suppurative appendicitis, requiring drainage. The laparotomy wound healed by granulation, leaving a long, ragged scar. There was no postoperative hernia, and the patient had not complained of constipation or of abdominal pain subsequent to his operation.

Dec. 21, 1918, he complained of a moderate degree of abdominal pain, but this was not associated with nausea or vomiting, or abdominal distention; however, attempts to move the bowels were unavailing. The patient was removed to the hospital, and an examination at that time detected very little in the way of physical findings, although there was a moderate amount of rigidity in the lower part of the abdomen. There was almost no tenderness, and the pulse and the temperature were normal. It was, therefore, decided on account of the patient's good condition to watch developments until morning. At that time there was marked rigidity and tenderness over the lower abdomen, and no evacuation of the bowels had taken place. Immediate laparotomy was therefore advised and the patient given a general anesthetic.

The old irregular scar was first excised and the peritoneal cavity opened near the middle line in order to avoid, so far as possible, adhesions of the viscera to the under surface of the old scar. When the peritoneum was opened, a large amount of bloody serum drained out. The remainder was mopped up with sponges, revealing a dark mass which at first resembled a large blood clot, but which on being delivered through the wound proved to be a coil of gangrenous ileum. There was a marked putrefactive odor emanating from the wound caused by necrosis of the ileum, resulting from the strangulation of an arc of intestine by a band of strong fibrous adhesions. This segment of bowel measured 30 inches in length and had reached an advanced stage of decomposition. There were areas of grayish pultaceous tissue which were extremely friable; the remainder of the gangrenous loop was black and the vessels thrombosed. A moderate degree of septic peritonitis had been set up by the contamination of the peritoneal surface by the pathogenic flora of the intestinal contents and by the saprophytic organisms of putrefaction. This was evidenced by the blistered appearance of the peritoneum. No cultures of the exudate were made.

Intestinal resection by the suture method was done. The gangrenous arc of intestine, together with a generous strip of sound tissue on each side of the necrotic area, was isolated between intestinal clamps and resected, including the accompanying mesentery. Before removal of the segment of mesentery, it was carefully inspected to make certain that the stumps of bowel to be reunited would be assured of an adequate blood supply.

The anastomosis was made with two rows of silk suture. The method of Connell was employed for the first row and a second supporting line of interrupted sutures for the second stitch. In order to make the union as secure as possible, a piece of omentum of suitable size was amputated, and was sutured around the anastomosis in such a manner as to encircle the bowel at the point of contact of the divided ends. The intestine was then dropped back into the abdomen and the repair of the abdominal wall begun. On account of the large amount of connective tissue incident to the old suppurating wound, it was necessary to dissect out a large amount of scar tissue and to undercut laterally for a considerable distance to obtain normal tissue for the introduction of sutures. Closure was done in layers, leaving room for the introduction of two large rubber drainage tubes, one of which reached down to the lowermost part of the pelvis while the other reached down to the anastomosis. A pint of physiologic sodium chlorid solution was given intravenously while the patient was still on the operating table.

The after-treatment consisted of maintaining the Fowler position, the administration of the continuous drip saline, and morphin to allay peristalsis and pain.

On the third day a low enema was given for the relief of gas pains, and as often as necessary thereafter There was no postoperative nausea and vomiting, and the patient took orange juice and water by mouth on the third day.

This patient developed a small fecal fistula, which healed slowly without any further operative procedures.

Comment.—The mechanical ileus that developed in this case was directly chargeable to the old adhesions that had developed at the site of the former infection.. No attempt had been made to roll out the cut edges of the peritoneum, which frequently cement themselves to the underlying viscera and omentum, even in those cases in which no infection occurs. It is, therefore, the duty of the operator to safeguard his patient so far as possible from the danger of postoperative adhesions, by not permitting the cut edge of the peritoneum to be infolded. This can be easily accomplished by always bringing the needle out on the endothelial surface of the peritoneum.

Case 2.—*Thrombosis of the mesenteric veins, with gangrene of 42 inches of bowel.*—Sergeant H., admitted to the medical service of Major J. N. Hall, Camp Logan, Houston, Texas, Dec. 16, 1918, had felt in his usual good health and had gone to town on a pass. He ate a large amount of peanuts in addition to a hearty meal, and the next morning complained of not feeling well and would eat no breakfast. A few hours later he was seized with acute abdominal pain, nausea and vomiting, and tenderness over the whole abdomen. Attempts to move the bowels by cathartics and enemas were unavailing, and tympany became marked. There was no elevation of the pulse or the temperature, and the physical examination of the chest was negative. The abdomen resembled that of a man suffering from retention of urine, as there was a tumor occupying the lower portion of the abdomen corresponding in size and shape to the overdistended bladder. The patient stated, however, that he had no difficulty in voiding urine; but, in order to confirm this, the bladder was catheterized and only a few drops of urine were recovered. It was thought possible that there might be an abscess of the abdominal wall with a resulting reflex ileus. Immediate operation was advised because, while it was impossible to make an accurate anatomic diagnosis on the basis of the underlying pathologic condition, it was impossible to escape the conviction that the man was suffering from ileus, either of the mechanical, dynamic or adynamic type. The tumor assumed the shape and size of the mass sometimes observed in the condition described under the term "ileus duplex," in which several coils of ileum are pasted together and lie with the ruptured appendix in the true pelvis.

This tumor, if appearing in a woman, would almost surely result in the diagnosis of uterine fibroid, before the bimanual examination was made.

Under general ether anesthesia a right rectus incision was made in order to give the most liberal exposure of the abdominal contents. The possibility of an abscess of the abdomiinal wall was kept in mind while going through the tissues, but no collection of pus was found. When the peritoneal cavity was opened, a considerable amount of bloody serum was found. There was an odor of putrefaction which was explained by the exposure of a large amount of gangrenous bowel. This was carefully lifted out until normal intestine was met, both proximally and distally. The gangrenous arc constituted 42 inches of the ileum and was consequent on a thrombosis of the mesenteric veins draining that segment. No other pathologic condition was noted to account for the mesenteric thrombosis.

It was considered doubtful whether operation was warranted because of the great amount of tissue involved, but on account of the patient's good general condition, it was felt that resection was justified.

The gangrenous arc was isolated with the intestinal clamps applied well into healthy tissue, and an end-to-end anastomosis was made by the suture method. Two large drainage tubes of rubber were inserted, one down to the site of the anastomosis, and the other down to the most dependent portion of the pelvis. One pint of physiologic sodium chlorid solution was given intravenously during the course of the operation, and the patient was returned to bed with a good pulse.

He was immedately placed in the Fowler position on the Gatch frame, and hypodermoclysis was begun with physiologic sodium chlorid solution by the drip method. The patient experienced no postoperative nausea nor vomiting, and there was but little abdominal distress. The bowels moved on the second day with the aid of an enema, and thereafter once or twice daily until convalescence was well established. There was a considerable amount of drainage of serum through the tubes, the first of which was removed on the fourth day, and the second on the eighth day. The rectal salines were discontinued on the fifth day, but the Fowler position was maintained for ten days. The highest point reached by the temperature was 100, and by the pulse, 120.

The abdominal wound healed by primary intention, except at the point at which the tubes were introduced; this healed by granulation, but there was no tendency to hernia. The patient returned to duty, Jan. 24, 1919.

Comment.—This case emphasizes the vast importance of making an early diagnosis of pathologic changes within the abdomen requiring immediate operation, and subjecting the patient to operation without delay, even though the precise anatomic and pathologic lesion cannot be recognized before entering the peritoneal cavity.

POLLEN EXTRACTS AND BACTERIAL VACCINES IN HAY-FEVER

SECOND REPORT

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In March, 1916,[1] we published our first report on the treatment of hay-fever by injections of specific antigens. We analyzed the literature and our own clinical experience for results in the treatment of hay-fever patients with pollen extracts alone, and with bacterial vaccines alone, and we concluded that neither method had given completely satisfactory therapeutic results. We suggested the theory that hay-fever symptoms could be explained by the conception of the disease as a combined state of hypersensitiveness to various pollens and a condition of nasal infection, or, as called by Adami,[2] "subinfection." There can be no doubt that each hay-fever patient represents a state of hypersensitiveness to a definite pollen, as can easily be proved by ocular or dermal tests with pollen extracts; but there are at least theoretical considerations indicating the presence of a complicating infection. Furthermore, because of the inconclusive results of pollen therapy and because bacterial vaccine therapy showed as good or better results than pollen therapy, it was concluded that the logical treatment of the disease would be by a combination of the two methods.

Up to that time our results had shown that approximately 64 per cent. of the patients receiving bacterial vaccines had been relieved in greater or less degree of their symptoms, and that 70 per cent. of those receiving pollen extract alone were relieved. In neither series, however, did we feel that we had reached the best possible therapeutic result. We reported, likewise, on four patients who had received pollen extract prophylactically in increasing doses during the 1915 season, and who, despite the injections, suffered during the hot spell in September from very severe attacks. All four of these patients were immediately treated with autogenous vaccines in large doses. The results in these four cases were, indeed, surprising; for after the first injection there was an almost complete disappearance of symptoms. In all four cases vaccine therapy was continued until the end of the season with unquestionable seasonal cures. The patients went through the remainder of that summer without any symptoms of hay-fever, although they had been sufferers for many years. From our experience we did not attempt to draw large conclusions, but merely suggested that our results warranted a continuation of efforts to prove or disprove the theory advanced and to apply the therapeutic principles to a larger number of cases.

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[1] Strouse, S., and Frank, I.: Pollen Extracts and Vaccines in Hay-Fever, J. A. M. A. **66**: 712 (March 4) 1916.

[2] Adami, J. G.: Brit. M. J. **1**: 177, 1914.

In our report we called attention to the fact that bacterial vaccines had previously been used in the therapy of the disease. The reports up to the time of our first publication were incidental and fragmentary. After the publication of our article several reports were made by other investigators on the combined method of treatment, the most important of which indicated favorable results. Medalia[3] believed from his experience that the pollen extract could be dispensed with in favor of bacterial vaccines. Scheppegrell,[4] without mentioning work of previous investigators, concluded that the most desirable method of treatment was a prophylactic injection of pollen extract followed, at the height of the season, by bacterial vaccines.

Our own work was continued during the season of 1916, but we did not employ exactly the same method of injection as we had employed in the previous year. The sensitization tests that we had freely used from 1913 to 1915 had shown that all of the autumnal catarrhs met with in the Chicago district were caused by ragweed pollen. Therefore, we had grown for us in a neighboring hothouse a large amount of ragweed, which pollinated early and gave us a plentiful supply of ragweed pollen for early injection. The extract was made and the dilutions employed according to the method of Koessler.[5] During the season of 1916 sensitization tests were dispensed with because of our previous experience. Likewise, we did not control dosage by means of the quantitative skin reaction, because, as stated in our first article, it seemed proved that clinical results did not at all parallel the results of the dermal tests. Theoretically, one might expect such a state of affairs to exist exactly as occurs in typhoid fever when, as is well known, clinical immunity bears no quantitative relationship to the strength of agglutinins or bacteriolysins in the blood stream; Goodale[6] is of the same opinion. Using as a pollen unit a dosage equivalent to 0.0000001 gm. of pollen, we usually began treatment with an injection of 10 pollen units, increasing by various multiples, depending on the reaction of the patient. The accompanying tables give the details of the complete injections for a number of patients.

During the season of 1916 we attempted to investigate three points concerning which exact data were lacking: first, whether better results would accrue from combining in the prophylactic injections beginning in June or July both the pollen extract and the bacterial vaccine; second, the size of the dose of pollen extract; and, third, the relative value of autogenous vaccines as compared with stock vaccines. Concerning this last point it will be recalled that at the time of our first publication considerable attention was being paid to the question of nonspecific protein reactions, and the suggestion had been made to us that the results of our treatment in 1915 had not been due to the formation of specific antibodies, but had been due to a nonspecific protein reaction. If the results were due to a nonspecific reaction, then the theory underlying our treatment was incorrect. Therefore, in many cases, in 1916, we used a stock vaccine of *Staphylococcus albus* made from the nasal mucosa of one of the patients who, in the previous year, had been successfully treated.

TABLE 1.—PROTOCOL OF TREATMENT GIVEN MRS. F (CASE 1)

Date	No. Pollen Units	Dose
July 8	10	
July 12	20	plus .1 ccm. stock vaccine (equal to 50 million Staphylococcus albus)
July 15	50	plus .15 ccm. stock vaccine
July 19	150	plus .2 ccm. stock vaccine
July 22	350	plus .3 ccm. stock vaccine
July 26	500	plus .3 ccm. stock vaccine
July 29	700	plus .4 ccm. stock vaccine
Aug. 2	1000	plus .5 ccm. stock vaccine
Aug. 5	1500	plus .6 ccm. stock vaccine
Aug. 8	2000	plus .7 ccm. stock vaccine
Aug. 12	2000	plus .8 ccm. stock vaccine
Aug. 16	2500	plus .9 ccm. stock vaccine
Aug. 21	2500	plus 1.0 ccm. stock vaccine
Aug. 28	3000	plus 1.0 ccm. stock vaccine

There was considerable variation of opinion regarding dosage of pollen extract, and it seemed to us that the only possible solution of this problem lay in the therapeutic test. In some cases then our dosage ran as high as 3,000 pollen units. Furthermore, no data were available on the best method of injection, so we decided to try the combined prophylactic on a comparatively large percentage of our patients.

These three factors which entered into the treatment during the season of 1916 complicated considerably the interpretation of results as compared with previous years. A further complicating element was the excessive heat during the summer and the corresponding unusual severity of the hay-fever season. In 1916 patients who in previous years had been free from hay-fever symptoms in certain districts of Michigan and in the mountains of the East complained of symptoms in the supposedly hay-fever-free resorts.

TABLE 2.—PROTOCOL OF TREATMENT GIVEN MISS E. (CASE 2)

Date	No. Pollen Units	Dose
July 7	10	
July 12	20	
July 15	40	
July 18	80	
July 21	150	
July 25	300	
July 28	600	
Aug. 1	1000	
Aug. 4	1500	
Aug. 8		.1 ccm. stock vaccine
Aug. 11	2000	plus 2. ccm. stock vaccine
Aug. 15	2000	.3 ccm. stock vaccine
Aug. 21		.3 ccm. stock vaccine (hay-fever symptoms)
Aug. 28		.4 ccm. stock vaccine
Sept. 6		.5 ccm. stock vaccine

It was, therefore, difficult to interpret the results of injection therapy in the thirty patients treated. Of eleven patients treated by the combined injections from the early part of July through the hay-fever season, benefit of varying degree is noted in five, and in only one could the result be considered a seasonal cure. The treatment of these patients was practically identical and will be illustrated in Table 1, the protocol of a patient who received much benefit.

Although this patient showed some apparent good results from the treatment, in no others receiving the same method of treatment were results comparably good. The protocol might just as well have been from one of the patients who was not at all benefited. The impression gained from this series, when compared with other cases treated the same year, is not good. Ten more patients were treated by prophylactic injections of ragweed pollen, followed at the beginning of the hay-fever season by the combination of vaccines and pollen extracts, or in some cases by bacterial vaccines alone. A protocol of one such patient who was markedly benefited is given in Table 2. Another patient treated similarly, who was able for the first time in years to remain in town, is given in Table 3. Both of the last two patients had been hay-fever sufferers for years and had received treatment with pollen extract or bacterial vaccines in the two preceding years. The protocols of the patients who showed no results from treatment cannot be differentiated from the two just given.

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[3] Medalia, Leon S.: Hay Fever: Its Treatment with Autogenous Vaccines and Pollen Extract, Boston M. & S. J. **175**: 201 (Aug. 10) 1916.

[4] Scheppegrell, William: Notes on Treatment of Hay Fever, Interstate M. J. **24**: 488 (May) 1917; The Treatment of Hay Fever and Asthma by Pollen Extracts and Bacterial Vaccines, N. Y. Med. J. **107**: 1016 (June 1) 1918.

[5] Koessler, K. K.: Illinois M. J. **26**: 12, 1914.

[6] Goodale: Hay-Fever and Hay Asthma, Musser and Kelly, Practical Treatment **4**: 531.

TABLE 3.—PROTOCOL OF TREATMENT GIVEN MR. A. (CASE 3)

Date	No. Pollen Units	Dose
July 12	20	
July 15	50	
July 21	150	
July 25	300	
July 28	600	
Aug. 2	1000	
Aug. 5	1500	
Aug. 9	2500	plus .1 ccm. stock vaccine
Aug. 11	2500	plus .25 ccm. stock vaccine
Aug. 17	2500	plus .3 ccm. stock vaccine
Aug. 22		.35 ccm. stock vaccine (mild hayfever symptoms)
Aug. 23		.4 ccm. stock vaccine

TABLE 4.—PROTOCOL OF TREATMENT GIVEN MR. C. (CASE 4)

Date	No. Pollen Units	Dose
Aug. 15	50	
Aug. 17	150	plus .1 ccm. stock vaccine
Aug. 21	300	plus .2 ccm. stock vaccine
Aug. 23	*No treatment (hay-fever seemed worse)*	
Aug. 25	Better	.1 ccm. (100 million S. albus autogenous)
Aug. 29		.25 ccm. autogenous vaccine (miserable attack)
Sept. 1		.2 ccm. autogenous vaccine (absolutely no relief)

Three patients were treated by increasing doses of bacterial vaccines alone during the course of the attack, two of whom showed some relief and one a seasonal cure. In contrast to these three are six patients given combined pollen extract and bacterial vaccines during the attacks. Of these six, four showed absolutely no effect, none was cured, and two moderately relieved. Case 4 (Mr. C.), with no treatment in 1914 and 1915, with the onset about August 15, was treated according to the protocol given in Table 4.

TABLE 5.—PROTOCOL OF TREATMENT GIVEN DR. C. (CASE 5)

Date	No. Pollen Units	Dose
July 13	2	
July 17	3	
July 19	5	
July 23	10	
July 26	30	
July 30	70	
Aug. 2	100	
Aug. 6	200	
Aug. 9	500	
Aug. 13	700	
Aug. 16	1000	
Aug. 19		100 million Streptococcus albus, autogenous
Aug. 23		200 million Streptococcus albus, autogenous
Aug. 26		300 million Streptococcus albus, autogenous
Aug. 30		400 million Streptococcus albus, autogenous

Summarizing the results in 1916, we find there was some benefit in a little more than half of the patients treated. Nothing like the startling results of the previous year was obtained. Perhaps the most important lesson was the negative value of some of the procedures. From the work this year it seemed unwise, first, to use such large doses of pollen extract; second, to carry the pollen extract injections through the period of hay-fever attacks; third, to combine the pollen and the bacterial vaccines in prophylactic injections, and, fourth, to use stock vaccines.

We were unable to continue our work in 1917, owing to uncontrollable circumstances, and in 1918 war conditions prevented a resumption on the scale hoped for. However, the 1918 results are interesting and valuable enough to include in this report. We treated only sixteen patients, and they were all treated in practically the same manner. We used this year one of the commercial pollen extracts (ragweed), started injections in July and continued to the height of the season, when autogenous vaccines were made and intensively injected. The protocol of one case given in Table 5 is practically the story of all.

All but two of the patients treated in this manner remained in Chicago throughout the hay-fever season in considerable comfort, and all felt that the relief from suffering was remarkably good. The two patients who went away before bacterial vaccines were started suffered rather intensely from hay-fever in a supposedly hay-fever-free section of Michigan. The results this year compared favorably with those of the 1915 season.

CONCLUSIONS

1. Specific therapy should not be undertaken in the presence of pathologic conditions in the nose or accessory sinuses. It has not been our experience that removal of polyps or similar operations has cured hay-fever patients, but it has been our experience that such operations may be necessary if subsequent therapy is to be successful.

2. In a disease with the remarkable seasonal variations of hay-fever, it would be folly to attempt to draw definite or final conclusions from the work so far reported; but from the consideration of our own and reported results, we believe it is fair to say that the method of treating hay-fever patients by early prophylactic injections of pollen extract, combined with late and intensive injections of autogenous bacterial vaccines, offers the greatest therapeutic promise of any method so far advanced in the treatment of this disease. Pollen extracts alone and bacterial vaccines alone, while giving results, do not seem to relieve so many patients as does the combined therapy. Treatment with pollen extract should start early in the season (June or July) and should be discontinued at the height of symptoms, at which time bacterial vaccines should be substituted.

3. We have not found that injections one year have prevented attacks the succeeding year, but we do note that in patients receiving continued treatment from year to year there is a definite tendency for the hay-fever symptoms to become progressively less severe.

104 South Michigan Avenue.

State Responsibility for Public Health.—The state, like the federal government, has at least three responsibilities in the field of public health—the prevention of the introduction of disease from without, the control of the intercounty, or intermunicipal spread of disease, and the health of all the people within the state from the general welfare point of view. These responsibilities can be met only by some degree of state control over local health conditions. This control should be more than advisory and should be applicable at all times and places and when and where there is a menace to other localities.—B. S. Warren, M.D., *Public Health Reports.*

over half of these were between 18 and 20. While these figures must not be accepted as absolutely correct, because of the common tendency among such women to falsify their ages, it is nevertheless believed that the errors tend to correct themselves, and that these are the ages at which most women of ill fame "ply their trade." It is in these years that the economic pinch and the temptation for wrong doing seem to be strongest. Society must place greater safeguards about the girls of these ages, and educative measures should be enforced in the training of the girl following adolescence.

Table 2 and Chart 2 show the distribution of the 126 cases according to the mental age on the Binet-Simon (Goddard) scale. From this it can be seen that 15.9 per cent. of the women had a mental age of less than 10 years, and that 53 per cent. had a mental age of 10 or under. In other words, only 47 per cent. can be said to have had average mental ability or above. Even if we grant that the average intelligence of persons of the negro race is two years below that of persons of the white race, the generally accepted figure, it is evident that women of deficient mentality of both races form about one half of the women arrested here for sexual offenses. If those of normal intelligence who are psychoneurotic, addicted to drugs, or otherwise abnormal are added to this group, the ratio of defectives is materially increased.

TABLE 2.—DISTRIBUTION OF 126 WOMEN ACCORDING TO THEIR MENTAL AGE

Mental Age	Number Cases at Each Age	Per Cent. of Women at Each Age	Number White	Per Cent. White	Number Colored	Per Cent. Colored
3	0	....	0	....	0	....
4	0	....	0	....	0	....
5	0	....	0	....	0	....
6	3	2.4	0	....	3	6.4
7	4	3.2	0	....	4	8.4
8	6	4.8	3	3.8	3	6.4
9	7	5.5	5	6.2	2	4.2
10	47	37.3	27	34.3	20	42.8
11	15	11.9	8	10.1	7	14.9
12	7	5.5	3	3.8	4	8.4
13	7	5.5	6	7.6	1	2.1
14	4	3.2	4	5.1	0	....
15	17	13.5	14	17.7	3	6.4
Adult	9	7.2	9	11.4	0	....
Totals	126	100.0	79 or 62.8%	100.0	47 or 37.2%	100.0

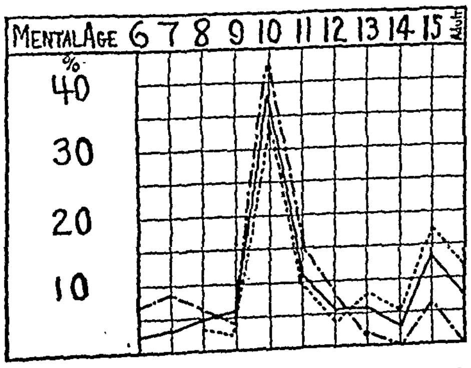

Fig. 2.—Distribution of 126 cases according to mental age.

Our percentage of 53 at the mental age of 10 or under agrees closely with the 51 per cent. "feeble - minded" reported by the Massachusetts Commission for the Investigation of the White Slave Traffic in its examination of prostitutes. Yet so many of the women examined in Newport News presented border-line cases that it is safe to say that hardly more than 10 per cent. of those examined here could under present laws be remanded to institutional care because of feeblemindedness. Thirty-eight per cent. of our cases fall in year 10 of the scale. This situation constitutes a great problem in the disposition of these cases. These women are mentally inferior, almost all of them being high-grade morons, yet they are almost entirely self-supporting members of society or capable of being such, aside from any commercial prostitution that they may carry on, and the suggestion of their confinement to institutions for the feebleminded would raise many serious objections. Their appearance is generally so good and their bearing so self-confident that the layman, and even the judge before whom they appear, would hardly suspect the deficiency which is probably largely responsible for their delinquency. Even should the average judge be told of their deficiency, it is probable that he would greatly discount it. Colonization of mentally defective prostitutes under conditions which would permit them to continue supporting themselves by industrial occupation under a fairly normal environment is probably the eventual solution of the problem.

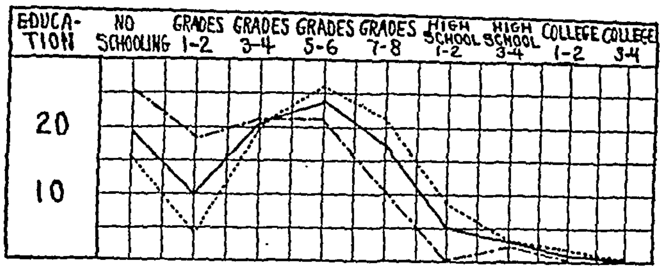

Fig. 3.—Distribution of 113 cases according to grade reached in school.

Comparison of the 53 per cent. mental deficiency at Newport News with similar data from other places is interesting. Sen.-Surg. J. O. Cobb[1] of the U. S. Public Health Service quotes the following percentages of "feebleminded" or mentally deficient:

	Per Cent.
Massachusetts commission for the investigation of the white slave traffic	51
Chicago Morals Court	62
Chicago Morals Court (126 definite prostitutes)	85.8
Illinois Training Schools for Girls (sexually immoral girls)	97
Massachusetts Reformatory for Women	49
Bedford State Reformatory	29.8
New York Probation and Protective Association (500 delinquents)	37
New York Probation and Protective Association (111 prostitutes)	35
Virginia Board of Charities and Correction (definitely determined commercial prostitutes in segregated district)	71.6

It is interesting to note that our figure approaches very closely the average of the above cases. It is to be remembered that the higher percentages quoted above are primarily from institutions which tabulated definitely established cases of delinquency and prostitution, often of the hardened, strictly commercial type, thus representing a specially selected group, whereas our cases are not largely commercialized vice, but rather sexual delinquents and venereals who are not old offenders.

Recent investigation in the state of Michigan by Katherine Ostrander[2] also emphasizes the menace of the feebleminded prostitute and quotes some interesting figures. Sixty women from 385 acknowledged or unacknowledged prostitutes, admitted to hospitals for venereal treatment, were found to be mentally retarded,

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1. Cobb, J. O.: New York M. J., Nov. 2, 1918.
2. Social Hygiene Monthly, October, 1918.

but not to a degree making necessary institutional care on that account. In psychopathic clinics established in Detroit and a few other cities, out of 247 women examined, forty-five (18 per cent.) were pronounced totally feebleminded and unable to adapt themselves to society; those feebleminded and psychopathic not to a degree demanding institutional care amounted to 35 per cent. of the whole, totaling 53 per cent. mentally defective, which is closely comparable to our data at Newport News.

These figures add evidence to the already well-established belief that virtually half of the country's prostitutes are mentally deficient or feebleminded. It is highly important, as data of this sort accumulates, for the country at large to realize that legislation must be enacted in the several states which shall hold in restraint the prostitution of the large group of high-grade morons who to the uninitiated appear to be perfectly normal and often unusually attractive physically.

The apparently great increase of cases of those at the mental age of 15, as shown by Table 2 and Chart 2, has no significance, since the old Binet-Simon (Goddard revision) scale stops at the year 15; a number of cases of this grade might have rated adult, which on a newer scale like the Stanford-Binet, used in the Army, might mean a normal distribution over the years from 16 to 18.

Eighteen women showed evidence of mental unbalance. Of these, nine measured mentally 15 years or over on the scale. Eleven were emotionally unstable, three epileptic, one a drug addict, and two probably had dementia praecox. The examinations were made on the day of the arrest or the first day following, so there were few opportunities to uncover such deviations from the normal. By all chances the numbers given above are greatly understated.

Chart 3 and Table 3 give the distribution of 113 cases according to the extent of schooling. It is significant that almost 20 per cent. of these women (25 per cent. colored and 15 per cent. white) were without schooling and were illiterate. This figure is in excess of Virginia's percentage of illiteracy as quoted in the U. S. Census of 1910, which showed that fifteen in every hundred persons in this state were illiterate.

TABLE 3.—DISTRIBUTION OF 113 WOMEN ACCORDING TO GRADE REACHED IN SCHOOL

Grade Reached in School	Number Reaching Grade	Per Cent. Reaching Grade	Number White	Per Cent. White	Number Colored	Per Cent. Colored
No schooling..	22	19.5	11	15.7	11	25.5
Grades 1-2....	11	9.7	3	4.3	8	18.6
Grades 3-4....	23	20.4	14	20.0	9	21.0
Grades 5-6....	27	23.9	18	25.7	9	21.0
Grades 7-8....	20	17.7	15	21.4	5	11.6
Grades in high school, 1-2..	6	5.3	6	8.6	0	....
3-4..	3	2.7	2	2.9	1	2.3
Years in college 1-2..........	1	0.8	1	1.4	0	....
3-4...... ...	0	....	0	....	0	....
Totals ...	113	100.0	70	100.0	43	100.0

It will be noted that 30 per cent. of the group did not go to school beyond the fourth grade. Adding to this the illiterates who did not go to school or who had less than one year's schooling, we find the number becomes 50 per cent. who did not reach the fifth grade. Many factors, no doubt, enter into the cause of so large a percentage leaving school so early or never having attended school, such as economic necessity, poor schools and low intelligence. The ignorance of these prostitutes is appalling.

Such are the facts. Public sentiment should create the solution of the problem. All that the investigator can do is to determine the facts of the case and present them to the public; the public acting on this knowledge should create the sentiment among its legislators and judiciary that will bring about the purging of society of the social disease, just as quarantine is enforced in any contagious disease.

SUMMARY

Summing up, we find these to be the outstanding facts in the mental aspects of prostitution as found in Newport News:

1. Fifty-three per cent. of the women arrested for prostitution and kindred offenses and held in the detention home for examination had a mental age of 10 or under.
2. In addition, 15 per cent. of those who were not mentally deficient showed mental disorder.
3. Ten per cent. were so deficient as to warrant, under existing laws, segregation in an institution for feebleminded.
4. Fifty per cent. of these women did not reach the fifth grade in school.
5. If we are seeking for a "type," we might say that the composite of the delinquent woman as found in Newport News would seem to be a woman of 19, slightly mentally deficient, with schooling to the fourth grade.

BACK PAIN IN THE MILITARY SERVICE *

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NEW YORK

Cases of pain in the back as seen in the military service may, for purposes of convenience, be grouped under the following headings:

- I. Referred pain:
  - A. Aneurysm and mediastinal growths.
  - B. Gallbladder disease, gastric ulcer, etc.
  - C. Kidney infections, renal and ureteral calculi and other genitourinary affections.
  - D. Static back.
  - E. Prominent abdomen due to deficient musculature, excessive fat, enteroptosis, etc.
- II. Functional pain.
  - A. Hysteria, malingering, the neuroses and allied conditions.
- III. Essential back pain (acute and chronic):
  - A. Traumatisms and acute infections.
    - 1. Sprains, strains, fractures and dislocations.
    - 2. Perinephritic abscess.
  - B. Sacroiliac conditions.
    - 1. Infections.
    - 2. Misplacement.
  - C. Sacralization of fifth lumbar vertebra.
  - D. Infectious conditions.
    - 1. Rheumatoid, closely allied to the arthritides in which focal infections may be the cause.
    - 2. Typhoid.
    - 3. Tuberculosis.
    - 4. Syphilis.
    - 5. Gonorrhea.
    - 6. Spondylitis deformans, osteo-arthritis, etc.

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* From the Surgical Service, U. S. Army General Hospital No. 1.

E. Congenital malformations.
F. Curvatures.
  1. End-results of infections.
  2. Rickets.
  3. Postural curves, deficient musculature, etc.
C. New growths.
  1. Carcinoma.
  2. Sarcoma.
  3. Osteoma, etc.

Although such a classification may be incomplete, it nevertheless serves as a guide and working basis in the majority of cases and it seems appropriate to discuss briefly these various groups in order to point out the more essential features with reference to their recognition, proper management and military disposition.

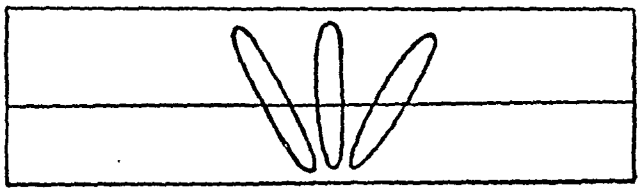

Fig. 1.—Method of strapping patients.

REFERRED PAIN

Back pain caused by aneurysm and mediastinal growths, together with the referred pain of gallbladder disease, gastric ulcer and affections of the kidney, has been exceedingly rare in our experience and needs but brief mention. In the series seen at this hospital only one case could properly be classified in this group. The diagnosis was glomerular nephritis and the principal symptom was a dull pain in the lumbar region. After a most painstaking study of this patient no other cause of back pain was revealed and it was finally classified as renal in origin.

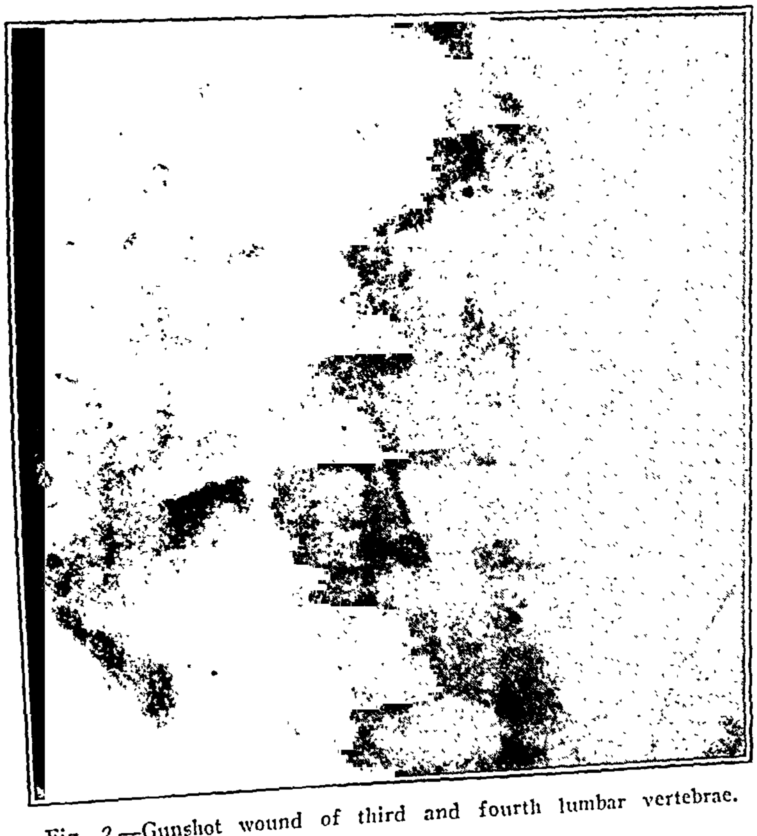

Fig. 2.—Gunshot wound of third and fourth lumbar vertebrae.

The condition commonly described as "static back" has been found to be relatively common. In our experience it was frequently observed in the younger troops from the southern states. Such soldiers are prone to be underdeveloped with poor flabby musculature. They are, as a class, tall, thin and typically enteroptotic. The spine itself shows few signs of any pathologic condition other than a moderate amount of lordosis. Many of these men are also the subjects of second or third degree flatfoot.

TREATMENT

In treating these cases our main purpose was directed toward general physical betterment. In addition to the usual hygienic and tonic treatment, plus the correction of any existing foot trouble, we found that carefully graduated remedial exercises were most beneficial in this class of patients. If the old anatomic teaching is accepted that the cervical fascia is connected with the pericardium and the latter with the diaphragm and that the raising of the diaphragm causes the abdominal wall to retract inward, then we may form a rational basis for and a proper understanding of remedial exercises and it is possible to appreciate the importance of chin up, chest out and belly in. We have placed our patients in this class in the general remedial detachment in which graduated exercises are undertaken under proper supervision. As a group they have shown marked improvement within a few weeks after exercises were begun and many of them were returned to full duty free from their former complaints. In a few cases a simple body support has been helpful in relieving the back pain.

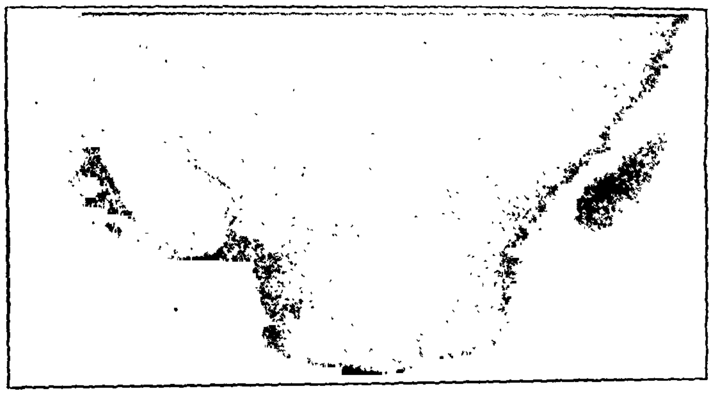

Fig. 3.—Sacro-iliac slip as evidenced by alteration and separation of the symphysis pubis.

FUNCTIONAL PAIN

Pain in the back is a frequent occurrence in diseases of the prostate, bladder, seminal vesicles and in some cases of varicocele. A complete venereal history together with a thorough genito-urinary and rectal examination, has become a routine practice in all cases of back pain seen at this hospital.

Malingerers frequently complain of pain in the back. We have seen several who claimed to have dull aching pain in the lower lumbar region. They simulate many of the common organic conditions and require the most careful observation and scrutiny before the real nature of the trouble becomes evident. Sacro-iliac disease is most often simulated.

Closely allied to this group of malingerers but distinct from it are the cases of hysteria and the various neuroses. Such cases, however, almost invariably show the typical stigmata that accompany such conditions and are relatively easy to diagnose.

We have seen all degrees of curvature associated with a simple hysteria or neurosis. A striking case was that of a soldier flexed almost to a right angle at the hips and who could walk only with the aid of crutches. This man promptly cleared up after the administration of a general anesthetic and the application of a plaster casing from the nipple line to the ankles. Another patient had a supposed shortening of 2 inches in his left leg. After careful examination this was found to be due to a tilting of the pelvis, hysterical in origin. Many of these patients can be promptly relieved of their troubles. Most often, however, they belong to the group of psychoneurotics, with hysterical manifestations, and are fit only for domestic service, for the reason that under stress of active warfare and its accompanying hardships, they break down with other nervous manifestations and become a burden to the government.

ESSENTIAL BACK PAIN

The various cases of traumatism are too numerous for a detailed description. They vary from simple muscular strain to marked cord lesions associated with paralysis. We have already begun to receive and care for the gunshot wounds of the spine which will soon be so common in the military hospitals of this country.

It has been surprising also to notice the frequency with which slight rotations and dislocations of the vertebrae have been revealed by careful roentgenographic examination—defects which apparently account for the disability of which the soldier complains. Most of these belong in the group of spondylolisthesis cases described by Killian and Neugebauer. The exact etiology is often obscure but in most cases it may be traced to direct traumatism.

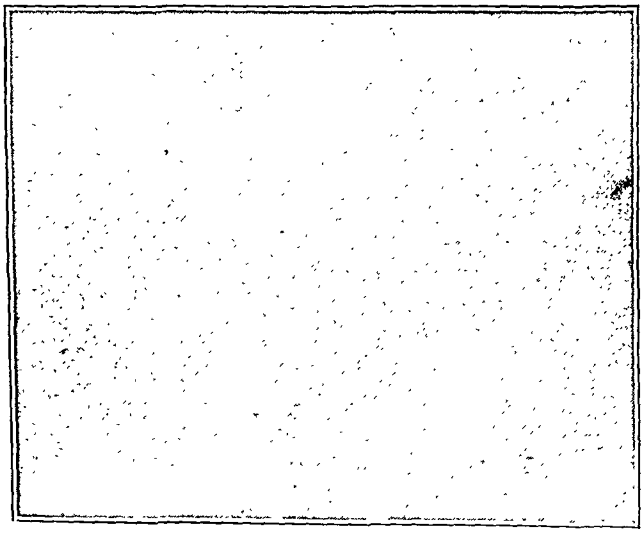

Fig. 4.—Sacralization of the fifth lumbar vertebra on the right side.

Very little can be done for such patients from a curative standpoint. They can, however, be relieved and markedly improved by some form of simple body brace and in the army most of them may be rendered suitable for domestic duty.

SACRO-ILIAC CONDITIONS

The question of sacro-iliac disease has been considered in the literature so fully that it hardly seems necessary to rehearse it again. Whether the sacrum slips forward, backward, upward or downward in the so-called dislocation, we will leave to the determination of those who are especially interested. There is not the slightest question that there is a pathologic condition of this joint and that the cases may be divided into infectious and mechanical groups. We have had two cases in which the infectious type seemed clearly established. One was an ordinary acute arthritis; the other was tuberculous in origin. Sacro-iliac dislocations or slips, as they are often termed, are relatively common. Soldiers with this affection give a history of recurrent attacks of pain in the back, coming on after lifting, usually while in a stooping posture. The pain is at first sharp and knifelike, but later develops into a dull ache. It is situated over the sacral region and localized on one side. It often radiates down the leg and in some cases is easily confused with the pain of sciatica or gluteal bursitis. Clinically these patients show spasm of the lumbar muscles and there is often a tilting of the pelvis toward the affected side. They complain of pain over the sacrum when bending forward and when the thigh is sharply flexed on the abdomen.

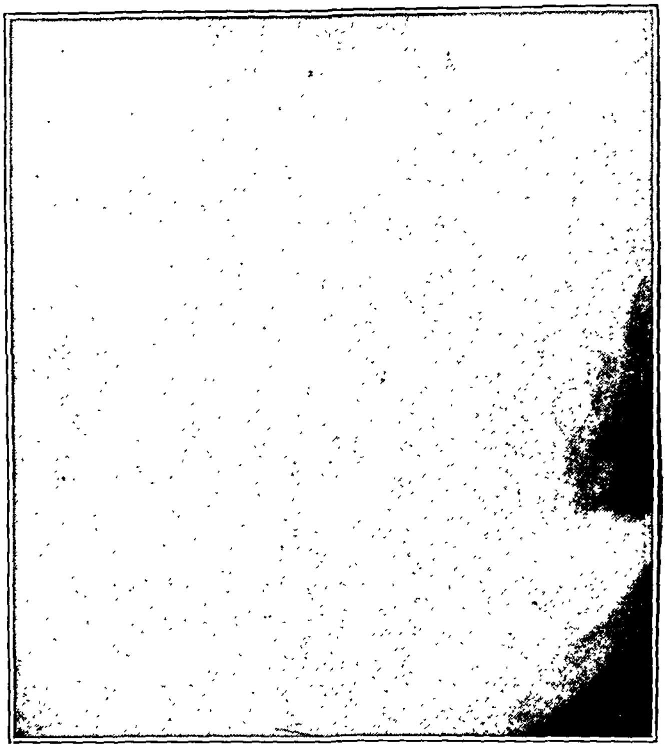

Fig. 5.—Lumbarization of the sacrum. A complete roentgenogram of the spine disclosed an extra lumbar vertebra with a congenitally deformed sacrum.

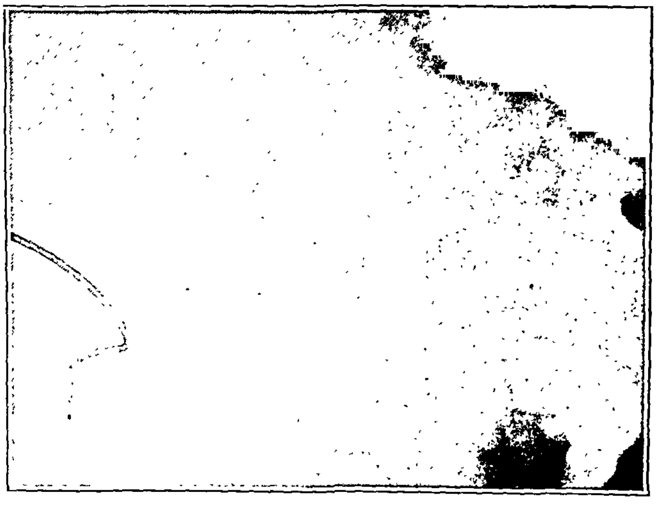

Fig. 6.—Destruction of the transverse process of the fourth lumbar vertebra due to tuberculosis—catheter in sinus tract.

Many of them complain of increased pain when asked to stand on the leg of the affected side alone. When in a sitting or reclining posture they favor that leg and use it as little as possible in rising. Heavy percussion over the lower spine and sacrum elicits pain over the affected area. Pain on compression of the pelvis has been very rare in our experience. There is often tenderness over the joint on rectal examination and one of the striking signs has been tenderness over the symphysis. It has been present in about 60 per cent. of the cases. This can be readily explained in view of the roentgen-ray findings. It has been definitely shown that the chief roentgenologic finding in this type of case is a misalignment of the symphysis due to the shifting of the pelvic bones as a result of the displacement in the sacro-iliac joint.

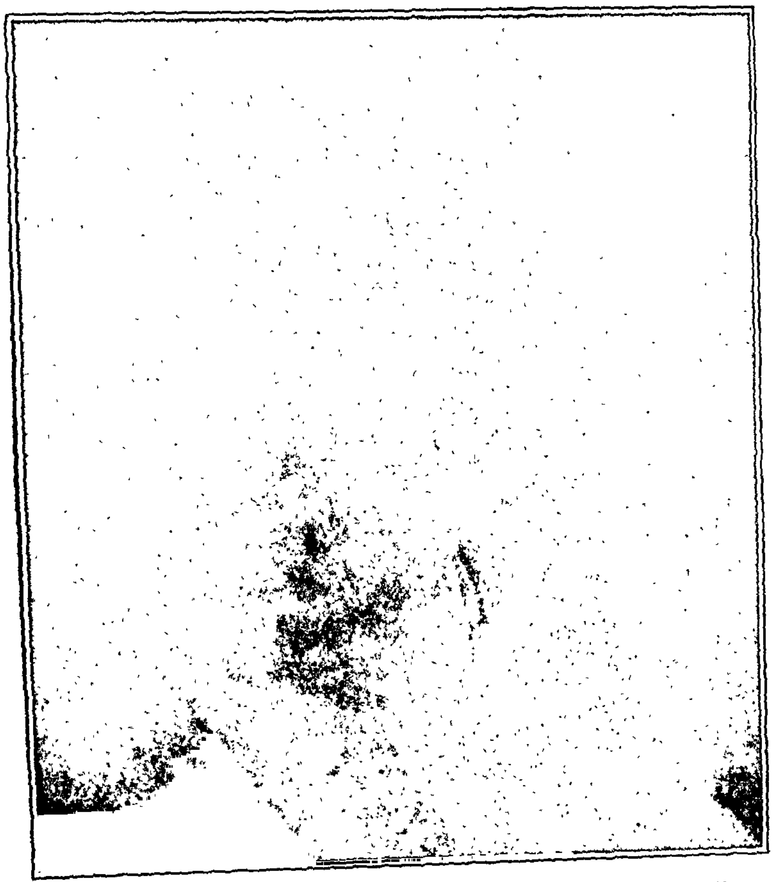
Fig. 7.—Old tuberculosis with destructive process of the bodies of the fourth and fifth lumbar vertebrae.

TYPE OF CASES ASSOCIATED WITH BACK PAIN IN ARMY GENERAL HOSPITAL NO. 1

	Number of Cases
Kidney pain	1
Static back	8
Prominent abdomen	1
Hysteria	4
Neurosis	6
Malingering	3
Traumatisms, sprains, strains, fractures and dislocations	28
Sacro-iliac conditions	32
Sacralization of the fifth lumbar vertebra	2
Infectious conditions:	
Rheumatoid	8
Typhoid	1
Tuberculosis	9
Syphilis	2
Gonorrhea	2
Spondylitis deformans	3
Osteo-arthritis	2
Myositis (lumbar)	15
Congenital malformations	2
Curvatures (excluding above):	
Rickets	2
Postural curves	8
Total	139

The space between the pubic bones is wider than normal and their relative position is altered. The old method of looking directly at the joint and of observing the angle between the spinal column and the ilium we have found to be of no value. So reliable do we believe the altered relationship at the symphysis to be that every case in our series has been corroborated by the roentgen ray before being recorded as sacro-iliac disease.

TREATMENT OF SACRO-ILIAC DISEASE

With reference to treatment we have found it mainly palliative. In the beginning rest in bed with some kind of fixation, such as adhesive strapping, is indicated. We have tried all the manipulations described for reducing these displacements but have not met with success in a single instance. In the later stages baking and massage seem to be helpful. In strapping these patients we have found the following method to be the most serviceable. Two wide pieces of adhesive tape (4 inch) are overlapped as shown in Figure 1. These are reinforced by three throat sticks and a third piece of adhesive tape is placed over the sticks. The last piece is designed to support the throat sticks and also to prevent the adhesive tape from sticking to the pubic hairs. This part of the belt is now placed on the patient so that the middle throat stick is directly over the symphysis. The ends are then firmly fixed to the pelvic bones. Straps are now run across the back so as to overlap the ends of the original pieces. These straps are put on with a great deal of tension and are designed to give tight support. Adhesive strapping has been used early in all our cases; later sacro-iliac belts have been applied. The belt most in use here is one composed of brown canvas made very simply and held

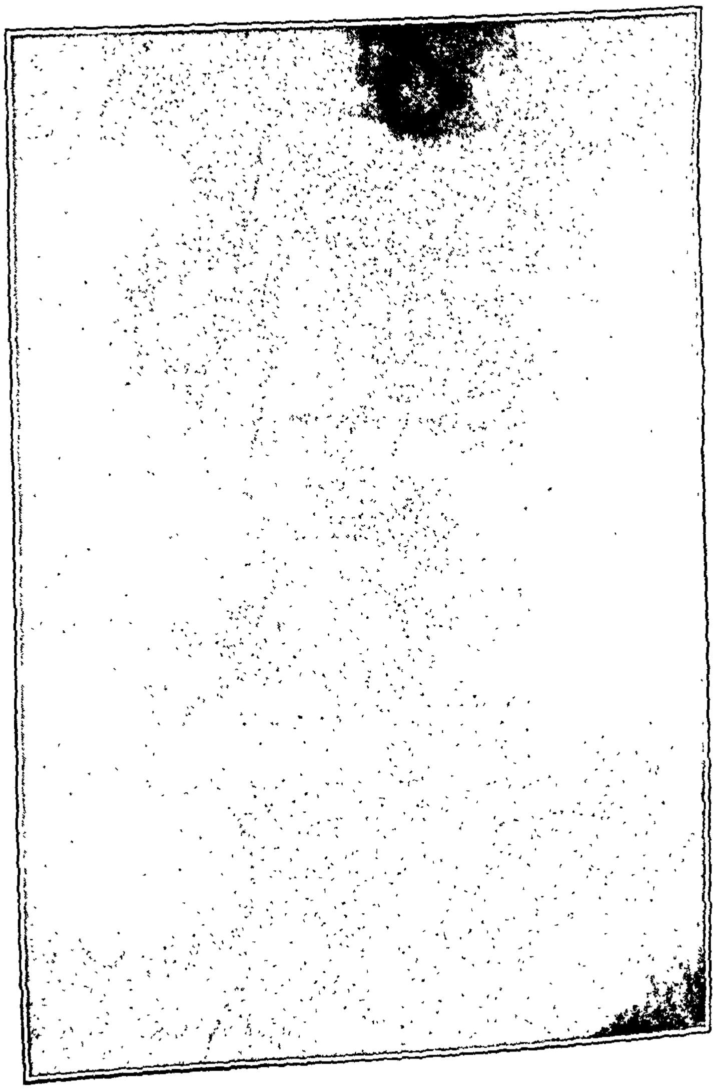
Fig. 8.—Spondylolisthesis.

in place by three buckles and two rubber perineal bands. As a class, patients with sacro-iliac trouble make poor soldiers. The recurrence of the disability is very common and makes their service uncertain. This is especially true if they are required to carry heavy packs or do much lifting. A few of our patients have been sent to domestic duty, and others have been given full duty in special branches of the service.

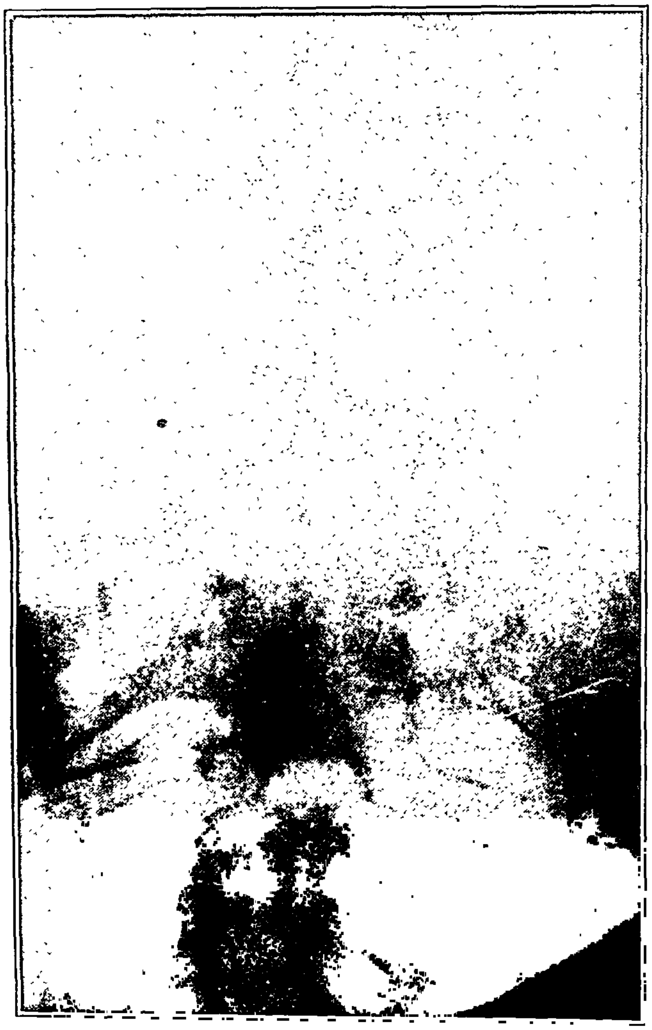

Fig. 9.—Hypertrophic arthritis with evidence of growth along the left lateral aspect of the fourth and fifth lumbar vertebrae associated with rotation.

SACRALIZATION OF FIFTH LUMBAR VERTEBRA

A condition closely associated with sacro-iliac dislocation is sacralization of the fifth lumbar vertebra. In these cases the roentgen ray shows an abnormally large transverse process which is irregular in shape and often impinges on the sacrum or ilium. The symptoms and signs are identical with those of sacro-iliac dislocations and it is that alone that makes the differential diagnosis possible. In many cases the two conditions are associated. Several cases have been reported in which this condition was relieved by an operative procedure. The two cases in our series were discharged.

INFECTIOUS CONDITIONS

Infectious diseases of the spine and its coverings include a large variety of cases and account for many instances of pain in the back. Myositis which is commonly called lumbago, is so familiar that it needs no discussion or elaboration. In the cases of infectious diseases of the spine seen at this hospital there were two soldiers with hypertrophic inflammatory growths or exudates along the bodies of the vertebrae: one of these gave a history of recurrent attacks of rheumatism. In this case the chief symptoms were those of nerve root compression. Both men were discharged as unfit for military service.

Besides these types of infections we have had one gonorrheal spine with ankylosis in the lumbar region, also one typhoid spine with destruction of the intervertebral disks. The soldier in the latter case was given a supporting jacket with good results. Both men were made fit for limited service only.

Two cases of syphilis of the spine were also seen. These showed rather marked destruction of the vertebrae. Both these soldiers were discharged after being given intensive syphilitic treatment and fitted with appropriate braces.

Fig. 10.—Osteo-arthritis involving dorsal and cervical vertebrae.

Spondylitis deformans is also grouped as an infectious condition and is closely allied to osteo-arthritis, of which we have had two cases. Three cases of spondylitis deformans were seen in our series. One was straightened under moderate head and foot extension. This patient was later given a jacket and sent to domestic service. The other cases were so disabling as to justify discharge.

Tuberculosis has been fairly common among spinal diseases in the army. Many of these are old healed cases, but there have been a considerable number of acute ones. The treatment in the acute cases is such as is now virtually standardized and consists in hygiene, heliotherapy, fixation, etc. We have seen no case of Pott's disease suitable for the bone graft operation of Albee.

CONGENITAL MALFORMATIONS

Congenital malformations of the spine we have found to be rather rare. Two such cases seen here are worth mentioning. One proved to be due to an extra pair of ribs which had their origin from the first lumbar vertebra and occurred in a patient who complained of pain directly over this area. Another was a case of lumbarization of the sacrum. This soldier had an extra lumbar vertebra and a small, malformed sacrum. His chief complaint was pain over the sacral region, which was readily accounted for by the roentgen ray findings.

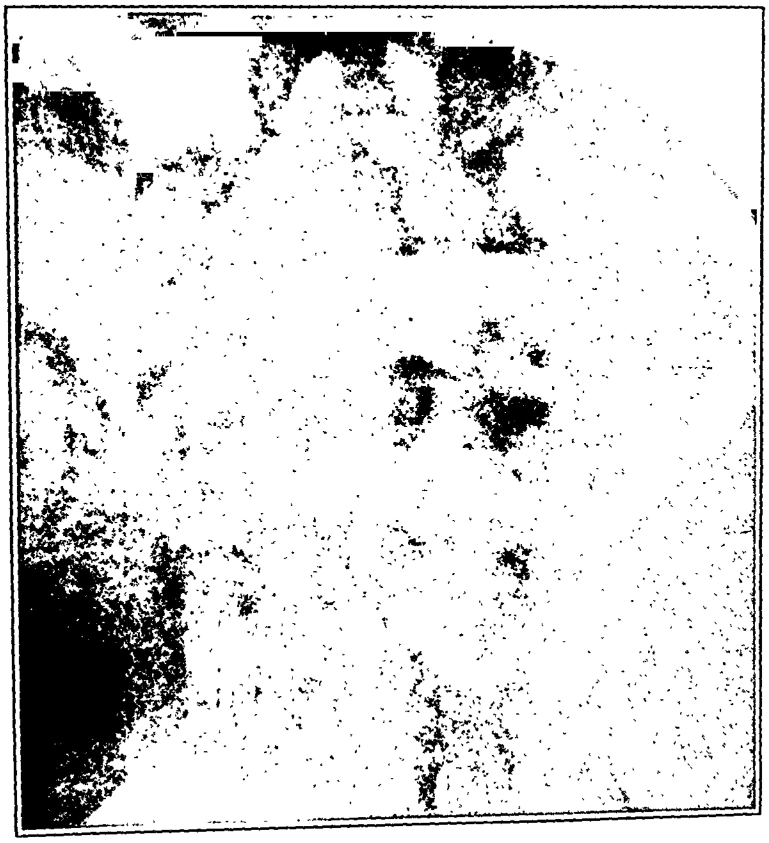

Fig. 11.—Hypertrophic arthritis with evidence of growth along the right lateral aspect of the fourth and fifth lumbar vertebrae and a shifting of the fourth lumbar vertebra to the left.

SPINAL CURVATURES

All varieties of spinal curvatures have been seen. Those which were functional were readily improved by remedial work combined in a few cases with a light support. The effect of remedial exercise was espe-cially gratifying in the cases of empyema associated with postoperative curvature, early sustained breathing combined with spinal calisthenics proving especially beneficial. The structural curves were found most frequently in cases of old tuberculosis. Two cases which were rachitic in origin were in the group of spinal curvatures. In the entire group of patients seen only one case of suspected tumor occurred. This at first was considered to be sarcoma but later was proved tuberculous.

In summing up the cases of back pain we wish to tabulate the actual grouping of 139 cases studied in the orthopedic division of the department of surgery at this hospital during the last six months. We believe the classification will represent the ordinary type of cases associated with back pain, as seen in army general hospitals.

In studying these cases we have been impressed by the infrequency of malingerers and by the comparatively small number of cases in which some pathologic condition of the spine or its coverings could not be actually demonstrated. We desire to emphasize the thoroughness with which cases of back pain should be studied, and to call attention to the necessity of group cooperation in order to arrive at proper conclusions. In this hospital the so-called orthopedic work is so intimately a part of the general surgical service that it has been possible to study and manage this field of our work with mutual interest and benefit to all concerned.

In presenting the roentgenograms we are particularly indebted to Major L. G. Cole and Capt. H. B. Podlasky for their enthusiastic cooperation and valuable aid in enabling us to arrive at certain definite conclusions. Roentgenologic interpretation alone was in many cases responsible for diagnoses that would otherwise have remained undetermined.

STUDIES IN INFLUENZA AND PNEUMONIA

II. THE EXPERIMENTAL PRODUCTION OF SYMPTOMS AND LESIONS SIMULATING THOSE OF INFLUENZA WITH STREPTOCOCCI ISOLATED DURING THE PRESENT PANDEMIC *

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During a study made some years ago[1] on the influence of environment on the pneumococcus-streptococcus group of micro-organisms, I noted marked changes in morphology, growth characteristics, infecting powers and immunologic reactions. Many of these changes appeared to be true mutations. Observations I have made since then, particularly during this epidemic, corroborate those findings and suggest the possibility that the present pandemic may be the result of infection by mutation forms of this group of micro-organisms. In studying the infecting power and other properties of streptococci when they are first isolated from tissues and foci of infection in various diseases including poliomyelitis, certain strains of streptococci which produce green discoloration on blood agar and which have peculiar infecting powers, specific immunologic properties and etiologic relationship have been found. In view of these facts, which are regarded as fundamental, it was thought possible that the peculiar clinical and pathologic picture of influenza, its accompanying pneumonia, and other lesions might be due to bacteria having peculiar infecting powers and other specific properties. The presence of a pandemic strain among the varieties of pneumococci and streptococci isolated by many observers was considered possible.

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* Presented before the Federation of American Societies for Experimental Biology, Baltimore, April 26, 1919.

[1] Rosenow, E. C.: Transmutations Within the Streptococcus-Pneumococcus Group, J. Infect. Dis. 4: 1-32, 1914.

The somewhat peculiar green-producing streptococcus, described in a previous paper,[2] has now been isolated quite constantly from a large series of cases of influenza. In making cultures from the blood, from the lung exudate, and from peribronchial lymph glands in patients who died from acute pulmonary edema and pneumonia, we were struck by the fact that the former was often sterile or contained few colonies and that the number of bacteria, particularly green-producing streptococci, were few in number in the latter as compared, for example, with that found in lobar pnuemonia. Following intraperitoneal injections in guinea-pigs of the sputum and cultures, invasion by this organism was found in most instances, but, as in persons with influenza, the number of organisms in the blood was strikingly small and far less than that found in animals dead from intraperitoneal injections of type pneumococci. A special mechanism for the cause of death was thus indicated. In the animals it was found that the organism, when injected intraperitoneally or intravenously, tended to localize in the lung and to produce hemorrhages and bronchopneumonia, associated with a varying degree of emphysema (Fig. 1). This was not noted in animals dead from intraperitoneal injections of type pneumococci. The average volume of the lungs, the total displacement of water of guinea-pigs weighing about 350 gm., was found to be as follows: normal guinea-pigs killed with chloroform, 5.2 c.c.; guinea-pigs dead of intraperitoneal injections of type pneumococci, 6.7 c.c.; and guinea-pigs dead from intraperitoneal injection of sputum and green-producing streptococci from influenza, 12 c.c. Since localization tended to be in the lung it was thought that direct application of the organism to the respiratory tract might afford better opportunity to study the peculiar infecting power of the bacteria found during this pandemic.

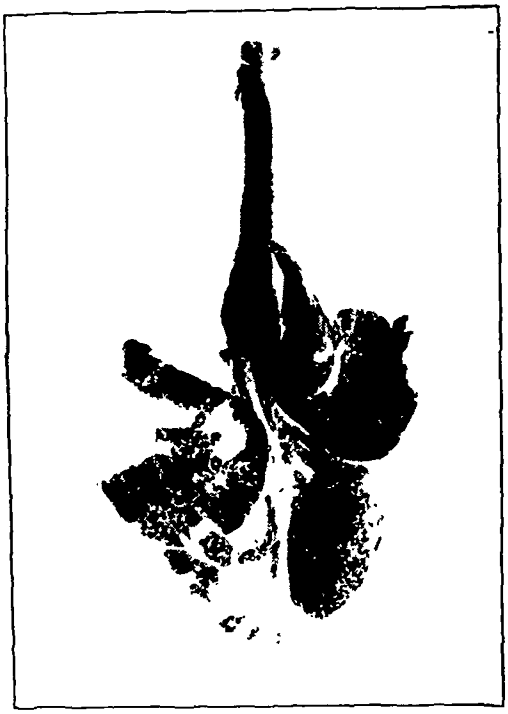

Fig. 1.—Lung of guinea-pig 761, injected intraperitoneally, showing hemorrhage, bronchopneumonia and emphysema. Total volume 12 c.c.

A simple method for intrabronchial injections of guinea-pigs was devised similar to that used in dogs by Lamar and Meltzer and in rabbits by Winternitz and Hirschfelder. Discarded ureteral catheters cut at an angle of 45 degrees with the margins rounded are used to make the injections. The guinea-pig is wrapped in a towel, the head held in place by the handles of an inverted artery forceps., The mouth is held open by spring wire retractors and the tongue is depressed by a suitable small instrument. Under a strong reflected light, properly shaded, the catheter is inserted into the larynx with a quick stroke before the contraction of the muscles of the epiglottis can divert the tube into the esophagus. The animal's sharp, quick cough and total inability to use its voice, and the sensation of the catheter's passing the tracheal rings, indicate that it has entered the trachea. The injections, varying from 0.1 c.c. to 2 c.c. in amount, are made slowly through the catheter with a syringe and needle.

By this method numerous experiments have been done with various strains of bacteria, including pneumococci, green-producing streptococci, hemolytic streptococci, staphylococci and influenza bacilli from persons with influenza as well as those from normal persons and other sources. The details of these experiments are reserved for subsequent reports; the purpose of this paper is to record a brief summary of the principal results obtained with strains of the green-producing streptococci and pneumococci belonging to Group IV from cases of influenza. By intrabronchial injection of these organisms a picture simulating influenza and pneumonia has been produced. Numerous animals have succumbed to acute pulmonary edema, to bronchopneumonia, to pneumonia involving whole lobes, and to acute hemorrhagic exudation in the pleura and peri-

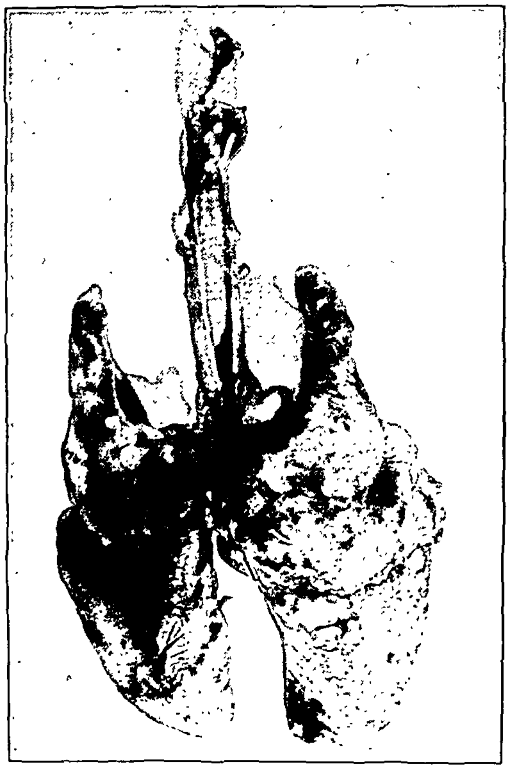

Fig. 2.—Lung of guinea-pig 851, injected intratracheally, showing coalescing bronchopneumonia of enlarged right lower lobe. Total volume 18 c.c.

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[2] Rosenow, E. C.: Prophylactic Inoculation Against Respiratory Infection During the Present Pandemic of Influenza, Preliminary Report, J. A. M. A. 72: 31, 1919.

cardium together with marked or slight lung involvement.

The lungs of these animals, as in persons with influenza, were often voluminous. Many showed acute symptoms resembling anaphylactic shock and typical bronchial spasm a few minutes after intratracheal injection. The type of respiration in the animals that lived twenty-four hours or longer was often very different from that in the animals having respiratory embarrassment from extensive consolidation of the lung following injection of pneumococci from lobar pneumonia, or of mass cultures from throats of normal persons. In the former, the chest was often in almost complete expansion, the animals were irritable and restless, expiration was prolonged and difficult, and breathing was accomplished chiefly with the diaphragm. Injections of epinephrin and atropin in large doses often relieved the respiratory embarrassment. In the latter group of animals the respiration was normal in character, excursions of the chest were free and easy, and the animals were quiet, but the rate was often much increased, depending on the amount of consolidation. Injections of epinephrin and atropin were without effect. The lungs in the first group were often extremely emphysematous and contained much hemorrhagic edematous fluid (Fig. 2). The massive bronchopneumonia was the rule in the animals that died late (Fig. 3). The rupture of alveoli, manifested as subpleural blebs, has been noted in animals showing extreme emphysema and hemorrhage. In a number, air was found in the mediastinal tissues, and several showed subcutaneous emphysema about the thorax. Sections of the lungs showed extremely narrow lumens of bronchi often filled with exudate. The mucous membrane appeared in great folds and the cartilages in the wall of the larger bronchi were often distorted as a result of the extreme spasm of the bronchial muscles (Fig. 4). The marked constriction of bronchi must have occurred before death and was not due to the fixation in 10 per cent. formaldehyd solution, since the total volume of lungs after fixation in formaldehyd solution (Kaiserling's solution) was found to be only about one-sixth less than that of the fresh lung. This picture is identical to that of the anaphylactic lung obtained by the usual methods, except that marked edema and hemorrhage occurred in the mucous membrane of the trachea and bronchi and in the interstitial tissue and the alveoli. The lungs of animals injected with type pneumococci, or with mass cultures from influenza and from normal persons, were not much larger than normal. The mucous membrane of the trachea and bronchi appeared normal. There was little hemorrhagic edema, but a variable amount of consolidation occurred, usually of the lobar type. The bronchi were not constricted and the dilatation of alveoli was absent. In addition to the picture in the lung, many of the animals aborted and many showed localization in the uterus. The picture of influenza was simulated in still other ways. There was delayed coagulation of the blood obtained from the heart and lung exudate in the animals, as in persons dead from influenza. Leukopenia usually occurred following injection of the strains. Leukocyte counts were made in 195 animals, following injections of numerous strains and their filtrates. Eighty-eight of these showed marked leukopenia, forty-one moderate leukopenia, thirty no change, thirty marked increase, and thirteen slight increase in leukocytes. The strains from patients showing marked leukopenia produced, usually, leukopenia in animals, while those from patients with leukocytosis usually produced leukocytosis in animals. Many animals (Table 1) showed leukopenia for a day or two; they appeared sick or prostrated; and, as recovery ensued, the leukocyte count increased. A persistent leukopenia was the rule in the animals that died.

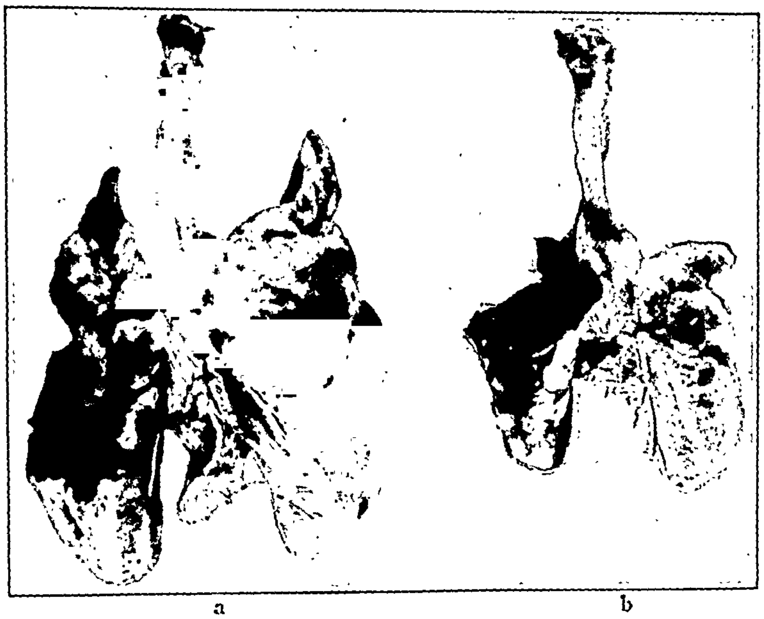

Fig. 3.—*a*, lung of guinea-pig 968, injected intratracheally, showing marked hemorrhagic edema and emphysema. Total volume, 22 c.c. b, lung of guinea-pig of same weight dead from spontaneous pneumonia. Total volume 6.5 c.c.

In Table 1 are given the leukocyte counts in a series of animals following the injection of a number of strains, together with controls injected with type pneumococci. All but one of nine animals injected with Strain 2800 showed a marked or moderate leukopenia, while one showed slight leukocytosis. This difference in the behavior of an occasional animal was noted with other strains. The results as shown in Table 1 represent in a general way those obtained throughout these experiments. In some instances the cultures and their filtrates became so toxic that very small doses sufficed to cause hemorrhagic edematous frothy fluid to exude from the nose and mouth before death, and marked emphysema and hemorrhagic edema of the lung were

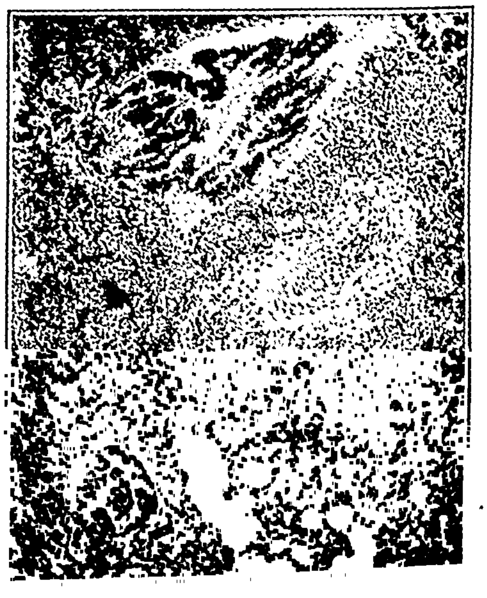

Fig. 4.—Section of lung shown in Figure 3 *a*, showing marked dilatation of alveoli, extreme contraction of bronchi, interstitial and alveolar hemorrhage, and infiltration. Hematoxylin and eosin. × 70.

found after death. One filtrate was so toxic that the instillation of 0.3 c.c. into the nostrils of a guinea-pig caused death in forty minutes from hemorrhagic edema and emphysema of the lung.

The freshly isolated strains from influenza and its accompanying lesions have been found to produce relatively large amounts of "anaphylatoxin" both in vitro and in vivo. The idea that the "virulence" of these bacteria may depend in part on their ability to produce "anaphylatoxin" is in accord with my[3] previous findings that virulent pneumococci and their filtrates produce a larger amount of this toxic substance than avirulent pneumococci. The picture in animals is clearly that of an anaphylactic intoxication, and suggests that the symptoms and lesions in man as recorded by numerous observers may likewise be due to this cause in which sensitization of the host to the bacterial proteins may or may not play a part. Findings as follows indicate this mechanism: (1) the delay in the coagulation time of the blood, leukopenia and cyanosis; (2) the marked tendency to develop acute pulmonary edema with a distended lung and relatively immobile expanded chest, and extreme respiratory effort; (3) the voluminous lung as found at necropsy; (4) the occurrence of the rupture of alveoli and consequent subcutaneous emphysema (bronchial spasm); (5) the frequency of abortion (contraction of unstriped muscle) and other uterine disturbances.

TABLE 1.—THE LEUKOCYTE COUNT FOLLOWING INJECTION OF GREEN-PRODUCING STREPTOCOCCI FROM INFLUENZA

No.	Inoculation			Leukocyte Count					Duration of Experiment in Days	Results
	Dose in c.c. of Dextrose Broth Culture	Strain and Place of Isolation	Place of Injection	Before Injection	Hours after Injection			After Death		
					24	48	72			
P. 959	0.1	2,800 sputum	Trachea	16,400	6,200	19,000	14,400	......	..	Recovery
P. 961	1.5	2,800 throat	Subcut. tissue	10,400	1,600	......	1,400	12,600	4	Death; subcutaneous cellulitis
P. 955	1.5	2,800 throat	Trachea	16,000	21,000	17,000	19,400	......	..	Recovery
P. 964	1.5	2,800^{2*} throat	Trachea	15,000	3,100	......	......	3,100	1	Death; hemorrhagic edema and emphysema of lung
P. 969	2	2,800^{2} throat	Vein	12,000	4,200	......	......	4,400	2	Death; hemorrhagic edema and emphysema of lung
P. 981	1.5	2,800.2 blood	Trachea	8,000	2,000	6.200	12,000	......	..	Recovery
P. 995	1.5	2,800.2 blood	Trachea	9,600	6,200	14,000	......	......	..	Recovery
P. 1043	2	2,800.2^{3} blood	Trachea	16,800	2,000	......	......	4,400	1.5	Death; hemorrhagic edema and emphysema of lung
P. 1056	2	2,800.4 blood	Trachea	12,000	6,600	5.000	8,000	8,000	3	Death; bronchopneumonia
P. 990	1	2,769^{2} sputum	Trachea	7,400	2,200	2 500	......	......	4	Death; bronchopneumonia
P. 952	1.5	2,795.3 sputum	Trachea	16,200	......	28,000	17,000	6,500	4	Death; bronchopneumonia and hemorrhagic edema
P. 1004	1.5	2,839 throat	Trachea	13,000	......	2,600	......	2,600	2	Death; hemorrhagic edema and emphysema
P. 1019	1.5	2,839 throat	Trachea	22,400	5,400	......	......	5,400	1	Death; hemorrhagic edema and emphysema
P. 1174	1.5	2,981.2 stool	Trachea	18,000	6,800	9,400	......	9,400	2	Chloroformed; lobar pneumonia
P. 1023	1.5	Pneumococcus III	Trachea	6,600	4,400	7,800	......	......	..	Recovery
P. 1025	1.5	Pneumococcus III	Trachea	6,800	6,800	6.800	......	......	..	Recovery
P. 1026	1.5	Pneumococcus II	Trachea	14,400	5,400	9,000	......	......	..	Recovery
P. 1027	1.5	Pneumococcus II	Trachea	16,800	16,600	15,400	......	......	..	Recovery
P. 1031	1.5	Pneumococcus IV	Trachea	13,200	18,600	17,500	......	17,500	2	Death; lobar pneumonia

* The figure to the right and above the figures indicating the strain designates the animal passage; the one following the period, the subculture.

From this study it is clear that among the green-producing streptococci isolated by many observers in influenza and the accompanying pneumonia, a strain or strains occur which possess marked and peculiar virulence. By intratracheal injection of these strains the picture of influenza has been closely simulated.

PROTOCOLS ILLUSTRATIVE OF SOME OF THE RESULTS OBTAINED

Protocol 1.—Guinea-pig 761, weighing 350 gm., was injected intraperitoneally, Nov. 26, 1918, with 3 c.c. of the dextrose-brain-broth culture from a single colony of the green-producing streptococcus isolated on blood agar plates from the sputum of a typical case (Strain 2611) of influenza. November 27 the animal appeared quite well; November 28 it appeared sick, respirations had increased. November 29 it was found dead. Serofibrinous peritonitis and moderate emphysema of the lungs, a total volume of the lungs of 12 c.c., localized hemorrhagic edema and bronchopneumonia of the right apical, cardiac and diaphragmatic lobes were found. The lung was edematous on the cut surface, and the edematous areas were surrounded by marked emphysema (Fig. 1). The pleura was normal. November 30, blood agar cultures of the blood revealed a moderate number of green-producing streptococci and a few staphylococci; those of the lungs showed a large number of green-producing streptococci and a few staphylococci, while blood agar cultures of the peritoneal exudate revealed countless numbers of green-producing streptococci and many staphylococci.

Protocol 2.—Guinea-pig 851, weighing 500 gm., was injected intratracheally, Dec. 28, 1918, with 0.5 c.c. of the dextrose-brain-broth culture of a green-producing streptococcus from the sputum of a case of typical influenza (Strain 2749) after one animal passage. Jan. 3, 1919, the animal died. Marked cloudy swelling of the myocardium, distention of the right ventricle, hemorrhages in the adventitia of the pulmonary artery, voluminous lungs weighing 20 gm., with a total volume of 18 c.c., and marked hyperemia of the mucous membrane of the trachea and bronchi were found. The right diaphragmatic lobe was almost completely consolidated. The consolidattion was clearly lobular in character, but numerous similar areas were completely coalesced. The left pleura was normal and the right was covered with a thick layer of adherent fibrin, particularly opposite the gray areas of consolidation (Fig. 2). There were no areas of softening; but a number of circumscribed areas of hemorrhage and edema in the emphysematous lobes were noted. Jan. 4, 1919, blood agar plate cultures of the blood showed a few colonies of the green-producing streptococcus; the pleural exudate, the pneumonic lung, the kidneys, and the mucous membrane of the nose showed countless numbers, while the edema fluid from the circumscribed areas in the emphysematous lung and the adrenals showed a few.

Protocol 3.—Guinea-pig 968, weighing 380 gm., was injected intratracheally Jan. 14, 1919, at 3:30 p. m., with 2 c.c. of the dextrose broth culture of the hemorrhagic vaginal discharge from a fatal case (Strain 2800) of influenza. Blood agar plates of the culture injected showed countless numbers of green-producing streptococci and a moderate number of colon bacilli. At 7:30 p. m., the respiration was difficult and greatly increased. The animal was restless and irritable and coughed at intervals. At 7:40 p. m., the condition was worse; respirations were extremely rapid and labored, and a bloody fluid was noted about the nostrils. At 7:42 p. m., the animal had a violent attack of bronchial spasm, in which it threw itself about in the effort to breathe. It bled profusely from the nose and mouth, and died three minutes later. The lungs were heavy and enormously distended; their total volume was 22 c.c. (Fig. 3 *a*). Numerous large and small hemorrhages were found throughout all the lobes. The alveoli, in places, appeared at the rupturing point. There was a small amount of bloody fluid in the pleural cavities. A large amount of bloody frothy fluid escaped from the larynx, and the nostrils were filled with similar material. The cut surface of the lung was extremely moist, dark red, and a large amount of hemorrhagic frothy fluid escaped. There were two small hemorrhagic fetal masses, one in the vagina and the other at the bifurcation of the uterus. The uterine horns were hyperemic. The placental mass surrounding the fetuses was hemorrhagic. A number of small hemorrhages were found in the mucous membrane surrounding the point of placental attachment. The amniotic fluid was clear and smears showed no bacteria.

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[3] Rosenow, E. C.: On the Toxicity of Broth, of Pneumococcus Broth Culture Filtrates, and on the Nature of the Proteolytic Enzyme Obtainable from Pneumococci, J. Infect. Dis. **11**: 286-292, 1912.

January 16, the blood and mucus from both horns of the uterus were sterile. The lungs and kidneys showed a large number of green-producing streptococci and colon bacilli; the pleura showed colon bacilli, and the adrenal, spleen and liver showed a few colonies of colon bacilli.

Sections of the lungs showed a striking picture of marked contraction of the bronchi, extreme dilatation of the smaller vessels, interstitial hemorrhage and cellular infiltration alternated with areas showing marked dilatation of alveoli. The dilated alveoli were often distended with edema fluid, blood corpuscles and leukocytes, or they were empty (Fig. 4). In the denser areas of hemorrhage and infiltration, the outline of the walls of the alveoli were wholly lost from edema and infiltration of interstitial tissue. The denser areas of infiltration were situated around the bronchi. A large number of gram-staining diplococci and a few bacilli were found in the infiltrated areas, both within the alveoli and the interstitial tissues.[4]

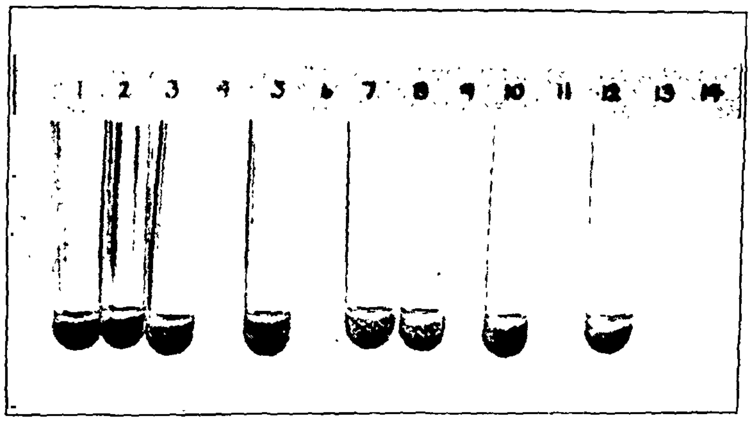

Fig. 5.—Photograph of experiment showing specific agglutination of streptococcus (Strain 3276) from influenza. Dilutions of serums 1-20. Tubes 1, 2, and 3 contain pneumococcus Types I, II and III serums; Tube 5 contains hemolytic streptococcus serum, Horse 9; Tubes 7 and 8 contain the monovalent serum following the injection of one strain of green-producing streptococcus from influenza, the former from a bleeding made March 3, the latter from a bleeding made May 4. Note the greater agglutination in the latter serum, Tube 8; Tube 10 contains normal horse serum; Tube 12, salt solution.

III. THE OCCURRENCE OF A PANDEMIC STRAIN OF STREPTOCOCCUS DURING THE PANDEMIC OF INFLUENZA *

The uniformity of symptoms in typical influenza suggests that the cause is a single bacterium having pandemic characteristics. The uniformity of the isolation of the somewhat peculiar green-producing streptococcus, previously described,[5] early in influenza and in the accompanying pneumonia, and the regularity of the invasion by this organism following the injection in guinea-pigs and mice, indicated early in the work that a pandemic strain might be found among this group of streptococci. The experiments following intratracheal injection, in which the picture of this disease is closely simulated, further indicate this possibility, and immunologic experiments were therefore instituted. I wish briefly to record here the main results obtained.

The serum of convalescent patients has been found to agglutinate specifically some of the more sensitive strains. The increase in agglutinins has been noted as early as the third day of typical influenzal attacks. The serum of cases that occurred early in the epidemic is found to agglutinate strains isolated then and kept in 50 per cent. glycerol as well as those isolated now, and vice versa. The results given in Table 2 suffice to illustrate those obtained in a large series of cases. The amount of agglutination with the different strains varies greatly and some strains are not agglutinated at all.

A monovalent immune serum has been prepared in a horse with one of these strains isolated from the blood in a typical fatal case. The horse has been injected with increasing amounts, first with the dead bacteria and later with the living. The serum has developed marked agglutinating power (Fig. 5) over these strains, agglutination occurring in dilutions up to 1:1,000 and 1:10,000.

The agglutinating power of various immune horse serums, as indicated in the tables, has been tested against numerous strains isolated from the sputum, throat, blood, and lung exudate. The well known methods for determining types of pneumococci, with minor modifications, were used. These included the animal inoculation method as worked out by Cole and the dextrose-blood-broth method as worked out by Avery. The various serums indicated in Table 3, were diluted 1:10 and equal amounts of this and the broth culture or suspension (0.2 c.c.) were placed in each tube and mixed, incubated one hour, placed in the ice chest over night, and then readings were taken. This dilution was found, after a series of titrations, to be best suited for routine purposes. Specific agglutinations with the monovalent serum as indicated in Table 3 have thus far been obtained in sixty-five of a total of ninety-eight cases studied. Some of these strains, just as has been found to be the case with the streptococcus from poliomyelitis, lose their specific character promptly on cultivation, while others remain susceptible to specific agglutination months after isolation. This was anticipated in the beginning of the work, and dense suspensions of the freshly isolated strains were placed in 50 per cent. glycerol. This method was proved efficacious in studying the specific properties of the poliomyelitis strains, and has been found equally useful in this study. Many strains isolated in the beginning of the epidemic are agglutinated specifically by this serum prepared with a single strain isolated early this year (January, 1919), just as are the strains from typical influenza isolated since then. The cases studied came from widely separated communities. Most of the negative agglutinations occurred when the cultures were made during convalescence. The results in some typical cases, however, suggest the possibility of subgroups. The specific strain, according to this test, has been isolated from the sputum as early as the first day of influenza, from the sputum in the accompanying pneumonia, and from the blood and lung exudate after death. It tends to disappear promptly during convalescence and is rarely found in normal throats. Strains of green-producing streptococci from a wide range of sources are rarely agglutinated by this serum. In studying the agglutinating power of various immune serums over strains from the sputum daily or on alternate days throughout the disease, it has been found that the strains are agglutinated specifically by this serum throughout the course in typical cases in which the patients recover without developing pneumonia or in which the pneumonia is of short duration. This is not usually true, however, of patients with protracted or recurring pneumonia, especially those who die (Strain 3276, Table 3). In these there may be a shifting of agglutination to pneumococcus serums, Types II or III, to hemolytic streptococcus serum, or, more often, they may not be agglutinated by any of the serums. Most of the specific strains, according to this test, do not ferment inulin and are not bile-soluble.

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[4] In addition to the references already given, the following will be found of interest:
Lamar, R. V., and Meltzer, S. J.: Experimental Pneumonia by Intrabronchial Insufflation, J. Exper. Med. **15**: 133, 1912.
Winternitz, M. C., and Hirschfelder, A. D.: Studies upon Experimental Pneumonia in Rabbits, Parts I and II, J. Exper. Med. **17**: 657, 1913.

[5] Rosenow, E. C.: Prophylactic Inoculation Against *Respiratory* Infection During the Present Pandemic of Influenza.—*Preliminary* Report, J. A. M. A. **72**: 31-34 (Jan. 4) 1919.

TABLE 2.—AGGLUTINATION EXPERIMENTS WITH HUMAN SERUMS

Serums from Influenza (Dilutions 1-10)	Day of Disease	Strains from Influenza						
		3271^2.3 Sputum	3296^2.2 Sputum	3331 Sputum	3333.2 Sputum	3333.2 Throat	3334.2 Sputum	Control Strain 3323.3
3074 (normal)	..	0	++	+	++	+	0	0
3075 (normal)	..	0	++	0	0	+	+	0
3076 (normal)	..	0	++	0	0	0	0	0
3282..........	..	++	++++	++	++	+++	++	0
3283..........	13	++	+++	++	+	+++	+	0
3331..........	6	++	+++	+	+++	+++	++	0
3332..........	5	++	+	+++	+	+++	++	+
3334..........	5	+++	+++	++	++	++	++	0
3338..........	7	++	++++	++	+	++	0	0
3339..........	2	++	++++	++	++	++	++	0
3348..........	4	+++	+++	++	+++	++	+	0
3348..........	10	++	++++	+++	+++	++	++	0
3349..........	3	++	+++	+	+++	++	++	0
3349..........	9	++	+++	+++	+++	+++	0	0
NaCl..........	..	0	0	0	0	0	0	0

TABLE 3.—AGGLUTINATION OF STREPTOCOCCI FROM INFLUENZA BY IMMUNE HORSE SERUMS

Immune Serums (Dilution 1-20)	Strains from																							
	Influenza																	Miscellaneous Sources						
	3201.2	3208	3208.2	3208^2.2*	3225^2	3226^2	3227^2	3231^2	3271	3297	3301	3302	3/29 3276	3/29 3276^2	3/29 3276^2.2	3/31 3276	4/3 3276	3295 Lobar Pneumonia	3342 Lobar Pneumonia	3270 Bronchitis	2698^2 Pneumonia	2684^2.2 Lobar Pneumonia	Pneumococcus I Pneumonia	Pneumonia in Guinea-Pig
Pneumococcus I...	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	0	0	0	0	0	0	3+	0
Pneumococcus II..	0	0	0	0	0	0	0	0	0	0	2+	+	0	+	0	+	2+	0	0	0	0	3+	0	0
Pneumococcus III.	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	3+	2+	0	3+	0	0	0	0	0
Streptococcus (hemolytic from cellulitis) Horse 9	2+	+	0	3+	2+	3+	2+	2+	2+	0	0	0	2+	+	2+	+	0	0	0	3+	3+	0	0	0
Streptococcus (nonhemolytic from influenza) Horse 15..........	3+	3+	0	4+	3+	4+	3+	3+	3+	3+	3+	3+	3+	3+	3+	+	0	0	0	0	2+	2+	0	0
Normal horse......	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	0	0	0	0	0	0	0	0
NaCl solution......	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* The figures to the right and above the figures indicating the strain indicate the animal passage, those to the right of the period indicate the culture generation.

The results obtained in this series of experiments are illustrated, in the main, in Table 3. It will be noted that the primary cultures (Strains 3208, 3297, 3301, 3302, 3276) and the peritoneal washings from mice (Strains $3225,^2$ $3226,^2$ $3227,^2$ 3231^2) were agglutinated specifically by this serum (Horse 15) in every instance as were the cultures from single colonies after animal passage (Strains 3208^2.2, 3276^2.2). The result in the third column (Strain 3208.2) shows that it is not always possible to fish the specific strain when the sputum or other material is plated directly.

Many strains of the green-producing streptococcus from influenza have acquired hemolytic power in my hands and resemble closely the hemolytic streptococci isolated from some of the cases, especially after death. The close relationship of the green-producing strains to hemolytic streptococcus is indicated, moreover, by the fact that the hemolytic streptococcus serum commonly manifests decided agglutinating power over them (Table 3).

The agglutination experiments show that the green-producing strains of streptococci from influenza are immunologically identical or closely related. If this is true, single highly agglutinable strains should absorb the specific agglutinins from the serum for all the rest. This has been found to be the case in a large number of tests. Strains isolated in the beginning of the epidemic absorb the agglutinins so that a large number of strains isolated recently are no longer agglutinated. The results with a number of these strains are given in Table 4. It will be noted that while the specific strain absorbed the agglutinins, Type II pneumococci, which were not agglutinated, removed few or no antibodies.

The symptoms and lesions of influenza have been closely simulated in guinea-pigs by the intratracheal application of green-producing streptococci from influenza. The existence of a pandemic strain among the green-producing streptococci or diplostreptococci in influenza is shown by the immunologic studies summarized in this paper.

TABLE 4.—SPECIFIC AGGLUTININ-ABSORPTION BY THE STREPTOCOCCUS FROM INFLUENZA

Mixtures (Dilution of Serum 1-40)	Strains											
	2698^2.2	2800^2.2	2874.13	3258^2	3265.4	3362.3	3370.4	3389	3403.2	3404	3412	3415.2
Serum Horse 15....	4+	3+	3+	2+	2+	3+	2+	2+	4+	2+	2+	3+
Serum Horse 15 after treatment with pneumococcus II............	3+	2+	3+	2+	2+	2+	2+	2+	3+	2+	2+	3+
Serum Horse 15 after treatment with streptococcus from influenza...........	0	0	0	+	+	0	0	0	+	0	0	+
Normal horse serum............	0	0	0	0	0	0	0	0	0	0	0	0
NaCl solution......	0	0	0	0	0	0	0	0	0	0	0	0

CANCER OF THE PROSTATE

A COMBINED SURGICAL AND RADIUM METHOD OF TREATMENT

ROBERT H. HERBST, M.D.
CHICAGO

In 1915 Barringer described a method of treating cancer of the prostate by introducing a single needle containing radium through the tissues of the perineum into the tumor mass. It is a modification of this principle which I wish to present in this report.

While many excellent results have been obtained with radium in the treatment of superficial cancers, the results in the deeper seated neoplasms have not been very encouraging, owing largely to the difficulty of bringing the radium directly into contact with the involved areas. It is my belief that this is accomplished in cancer of the prostate by exposing the tumor both above and below and by inserting multiple needles, containing radium, in different directions, thus bringing the radium into contact with the most remote parts of the growth.

Authorities differ as to the comparative frequency of carcinoma of the prostate, statistics varying from 15 to 40 per cent., although a majority believe that about one in five neoplasms of the prostate belong to the malignant class. It is interesting to note that while the earlier writers considered the condition as being infrequent, recent literature shows that such opinions have undergone a marked change. This can be well explained as being due to our broader knowledge of the condition, improved methods of diagnosis and a more thorough pathologic investigation of removed glands. We have all had the experience of removing a gland which we believe to be benign only to be informed by the pathologist that areas of malignancy had been found. Cancer of the prostate may develop as a new growth or as a malignant degeneration of a preexisting benign neoplasm, or it may appear coincidently with a simple hypertrophy. In order to define the type of tumor in which this method of needling the prostate is applicable, I will make the following classification:

1. The tumor may consist of a benign hypertrophy undergoing malignant degeneration or accompanied by beginning malignancy. These tumors are, as a rule, readily enucleated, and it is only on being examined microscopically that they are discovered to be malignant. This type is often benefited and sometimes cured by simple enucleation or by excision, as described by Young.

2. Another class of tumors begin as malignant growths in the lower periphery of the gland and gradually spread along the posterior part of the prostate to the seminal vesicles and ejaculatory ducts. These tumors are too far advanced for radical removal, but the symptoms can be greatly relieved, life prolonged, and the patient possibly cured by the judicious use of radium applied by means of needles, to be described in detail later.

3. In a third class of tumors the surrounding tissues have become involved, metastases have developed and there is a marked degree of anemia and cachexia. This type is beyond any form of treatment other than possibly drainage of the bladder to relieve retention.

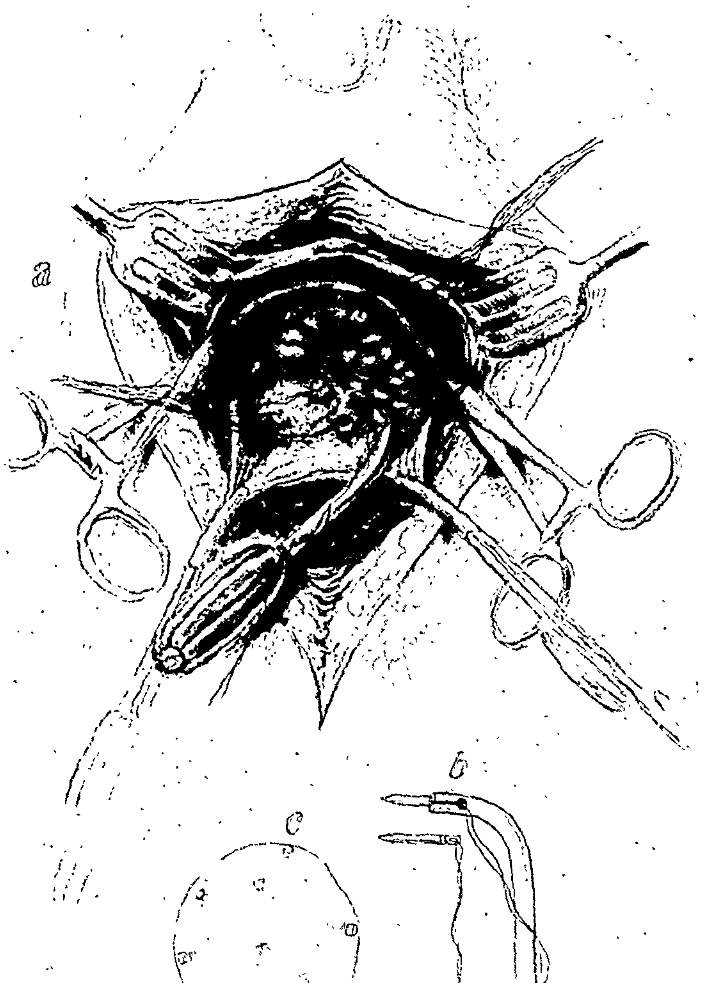

Fig. 1.—Operation for radium treatment of prostate cancer: *a*, suprapubic exposure of tumor, with the needles inserted in the tumor mass; *b*, needle carrier and needle; *c*, schematic view of position of needles after insertion.

SYMPTOMS

Unfortunately, the symptoms in cancer of the prostate are frequently not manifested until the condition is far advanced. This is particularly true of retention of the urine, which is a very early finding in benign hypertrophy. Irritability of the bladder may not develop until the disease has extended well up into the bladder neck. This is also true of hematuria. Although hematuria is a rather constant symptom, it is frequently of the terminal type. Pain at the end of urination is a common symptom. Pain accompanying the sexual act usually indicates the involvement of the lower end of the genital tract, the seminal vesicles and ejaculatory ducts. These patients sometimes complain of pain in the rectum radiating up the back, and down the thigh along the sciatic nerve. Residual urine is often a late manifestation.

Rectal examination usually reveals a stony hard, irregular, asymmetrical, nodular prostate. The rectal tissues are not movable on the tumor, and the tumor appears to be fixed. The term "frozen" has been used to describe this immobility. The prostate may not necessarily be greatly enlarged, but when one finds a hard, immovable prostate in a man of advanced years, one should be apprehensive of cancer. Loss of weight and strength and a marked secondary anemia are found as in other malignancies.

DIAGNOSIS

The diagnosis of cancer of the prostate is not necessarily difficult in an advanced case in which the patient complains of any or most of the foregoing symptoms, and on examination a hard, stony, immovable prostate is found. However, the patient to be most benefited is the one whose condition is discovered early, before many symptoms have developed, and in whose examination only a small, hard subcapsular nodule is found. In those cases in which there is a coincident carcinomatous development with a benign hypertrophy, the diagnosis of malignancy is frequently not made until the surgeon finds enucleation difficult or impossible. Whenever a prostate is enucleated with difficulty, one should be more than suspicious of malignancy. However, we must not lose sight of the fact that even easily enucleated glands on microscopic examination may show evidence of malignancy.

SELECTION OF CASES

Believing that radical excision of the malignant prostate cannot be carried out with any reasonable degree of safety and success except in the very early cases, we apply this method of radium needling to all advanced cases which do not show evidence of metastasis.

METHOD OF TREATMENT

A suprapubic cystotomy is made (usually under local anesthesia), with a liberal opening in the bladder wall so as to give easy access to the involved bladder neck, because in practically all these cases the tumor is fixed and cannot be pushed up into the bladder. A bimanual examination is then made to determine the limits of the tumor. By means of a needle carrier (Fig. 1 *b*), gold needles 1 inch in length, each containing 12 mg. of radium, are inserted into the tumor mass 1 cm. apart in different directions. The tumor is virtually converted into a pin cushion (Fig. 1 *a*). A silk guide, which is attached to each needle, is brought out of the suprapubic wound, and by means of it the needle is withdrawn. These needles are left in place for from twelve to fifteen hours, depending on how much of an exposure is desired. They are readily removed by traction on the silk guides. One such exposure will usually cause the removal of most of the upper part of the tumor, although this can be repeated after a few weeks if found necessary. As most of the tumors begin in the lower part of the gland, a second introduction of needles is made into this part of the tumor by making a dissection through the perineum and obtaining a complete exposure of the lower part of the prostatic mass (Fig. 2). It is well to allow from four to six weeks to elapse between the two steps of the operation. It may be readily seen that by this open method we are able to insert the unscreened radium directly into all parts of the tumor, and the action of the radium takes place in the center of the carcinomatous nodules. There is little reaction or pain following even long exposure. It is well to make the upper exposure first, because following the introduction of the radium a temporary swelling occurs, which is likely to cause complete retention, should the lower application be made first. I have not described this method of attacking the malignant prostate with the intention of reporting cures, because the number of cases treated has been too limited and the time since operation too short. However, some of the early results have been sufficiently encouraging to warrant reporting one of them, operation in which was performed ten months ago.

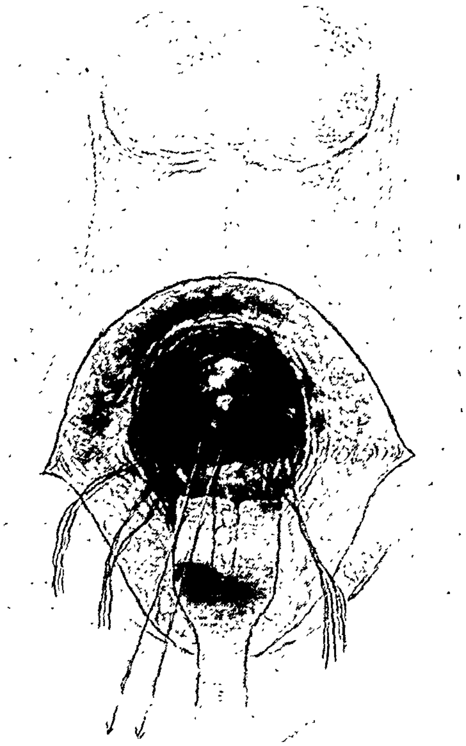

Fig. 2.—Perineal exposure of tumor with radium needles inserted.

REPORT OF CASE

A man, aged 66, was operated on about two years ago by an excellent surgeon for what was thought to be a benign hypertrophy of the prostate gland. On sectioning the removed tumor it was found to be malignant. The patient developed a prompt recurrence, and after a few months returned to the surgeon, who applied the radium to the tumor by introducing it into the rectum. Each one of these exposures, which were of short duration, with a moderate amount of radium, was followed by a severe reaction (radium, as a rule, is poorly tolerated in the rectum). After a number of these exposures the patient returned home in a greatly weakened condition, with little if any change in the size of the tumor. At this time he was referred to me. On examination I found a large, immovable, nodular mass occupying the site of the prostate gland. The patient was suffering from almost complete retention of urine, and catheterization was extremely difficult. He complained of severe pubic pain and great weakness. A suprapubic cystotomy was done and on inspecting the interior of the bladder, I found a large nodular mass projecting into the bladder in the region of the internal urethral orifice. By means of a needle carrier, eight needles, each containing 12 mg. of radium, were inserted into the tumor mass, about 1 cm. apart in different directions. These were allowed to remain twelve hours, and were easily removed by drawing on the silk guides attached to them. There was practically no reaction following this exposure. After six weeks the upper part of the mass had almost entirely disappeared. At this time a perineal section was made, thoroughly exposing the lower part of the tumor. A procedure similar to that described above was followed, and the needles were again allowed to remain in place for twelve hours. The wound was closed, sufficient space for the removal of the needles being allowed. Both suprapubic and perineal wounds healed in a few weeks. After a few months all that could be palpated was a moderate degree of infiltration along the urethra.

The patient returned recently for examination. Only a slight infiltration (probably fibrous tissue) could be palpated at the site of the tumor. He has regained all his lost weight, looks and feels well, has no residual urine, and his urinary function is good.

32 North State Street.

Responsibility.—City authorities are justly chanceable with the lives of all who die of preventable diseases within their jurisdiction, and they should be made responsible before the courts of justice.—Dr. Benjamin Rush.

Clinical Notes, Suggestions, and New Instruments

OSTEITIS FIBROSA

Joseph L. DeCourcy, M.D., Cincinnati
Surgeon, Seton Hospital; Assistant Attending Surgeon, Cincinnati General Hospital

REPORT OF CASE

F. L., a boy, aged 12, referred by Dr. Carroll DeCourcy, was admitted to the Seton Hospital, Jan. 13, 1918, with a fracture of the upper third of the left humerus, due to his having slipped on an icy pavement when coming home from school. Examination of the arm by palpation elicited an elongated, bony swelling in the upper third of the humerus, with point tenderness, crepitation and mobility at the corner of the swelling. The patient gave a history of having been vaccinated ten months previously, the reaction following the vaccination having been very severe. Whether the vaccination was a causative factor, is uncertain. For the last ten months the patient had continually complained of dull, rheumatic pains in the upper part of his arm, and was treated by medication and by external applications without relief.

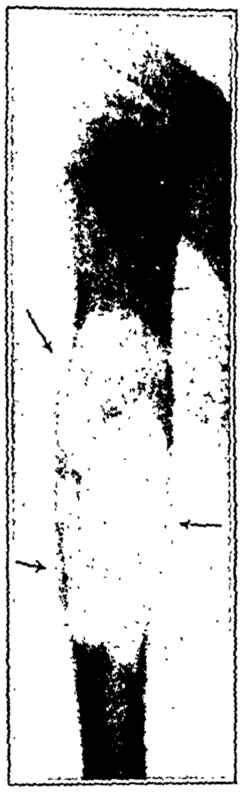

Fig. 1.—Arm of patient day following admission to hospital.

Fig. 2.—Arm of patient, one month after operation.

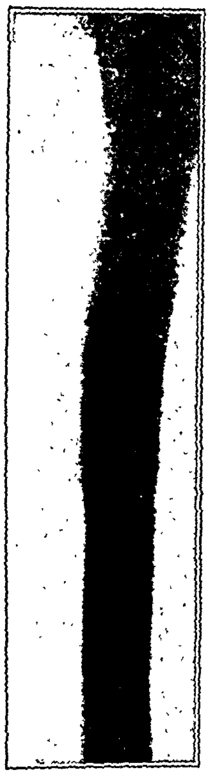

Fig. 3.—Arm of patient, ten months after operation; firm union between the two fragments.

The roentgenogram secured at the time of his admission to the hospital showed a rather marked absorption of bone in the upper part of the humerus, giving the impression of a cyst, and through this were shown fracture lines, considered to be pathologic features.

The operation, Jan. 18, 1919, revealed a cyst about 2½ inches in length, filled with bloody matter. The inside of the cyst wall was covered with what appeared to be granulation tissue. Because of the thinness of the cyst wall and the uncertainty of the diagnosis, the whole cyst, together with some healthy bone from each end, was resected, and a strip about 3 inches in length and one-fourth inch in thickness, of the boy's tibia, with periosteum, was transplanted into the medullary cavity of the upper and lower fragments. The periosteum was sutured over and the wound closed. The wound healed by first intention and the roentgenogram taken one month later showed the graft in position, with a large amount of callus covering it. Three months following the operation there is firm union between the two fragments.

On section, a few isolated giant cells were demonstrated. This, together with the gross appearance of the cyst, justifies us in making a diagnosis of osteitis fibrosa.

COMMENT

Eivind Platou,[1] in speaking of osteitis fibrosa, says that "trauma appears in many cases to be an etiological factor, although we are unable to explain how it can cause the disease or influence its genesis." In this case there was no history of trauma obtained, and if we can date the onset of the cyst from the vaccination, then it would seem that infection has played a part. It is possible that trauma so weakens the tissues that infection traveling in the blood stream can take hold.

It seems to be a matter of common agreement that the indicated treatment of these cases is curettage of the cyst cavity and then swabbing the cavity with some irritant for its stimulating effect. Bone grafting has been suggested in these cases a number of times, but does not seem to be in general use. It would seem that the uncertainty of the diagnosis of these cases from sarcoma, at the time of operation, would contraindicate curettage, for the same reason which contraindicates a removal of a section of a supposedly malignant tumor elsewhere. In other words, these bone tumors should be considered malignant until proved benign by microscopic study. And not alone for this reason, but because in the application of the bone graft we have a clean-cut piece of surgery which is uniformly successful in 100 per cent. of cases, if we can exclude infection, and its usage, in my opinion, should be encouraged in this type of case.

AN EXTRA TAG ON THE ABDOMINAL SPONGE*

J. C. Masson, M.D., Rochester, Minn.

The dramatic manner in which sponges are counted after each operation, in some hospitals, is evidence of the fact that "accidents still happen." It is quite probable that more medicolegal cases come to trial because something has been left in the operative field than because too much has been taken out of it.

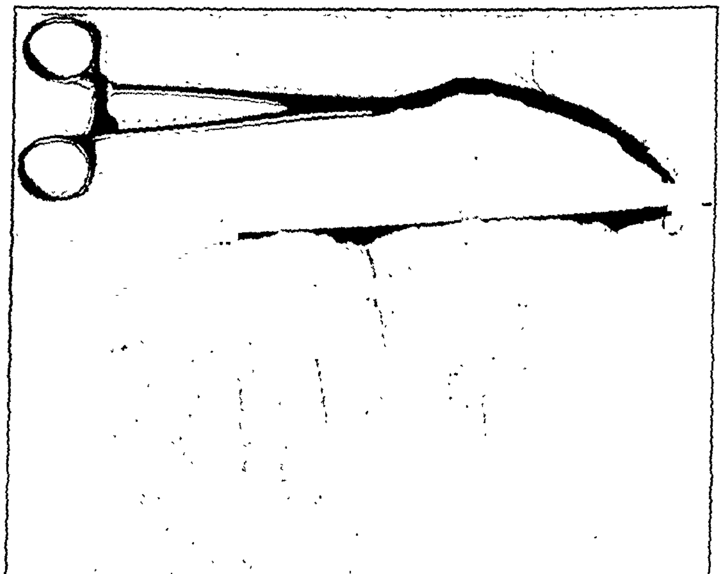

Fig. 1.—Abdominal sponge with ring attached.

Approximately 27,250 abdominal operations have been done at the Mayo Clinic within the last five years, and thirteen were for the removal of sponges. In most of these thirteen cases the patients came from rural districts, and had been operated on for acute conditions by general practitioners who probably had had very mediocre assistance and were further handicapped by the confusion attendant at such operations. The only wonder is that such accidents do not happen more often in this kind of surgery. After a more or less stormy convalescence, the patient recovers from the operation; but he is left with a persistent sinus, and while he has the original operator to thank for having saved his life, if he learns that a sponge has been left in the wound and is the cause of the sinus, he will seldom hesitate to enter action for unlimited damages.

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[1] Platou, Eivind: Osseous Cysts and So-Called Giant-Cell Sarcoma, Ann. Surg. 67: 312 (March) 1918.

* From the Mayo Clinic.

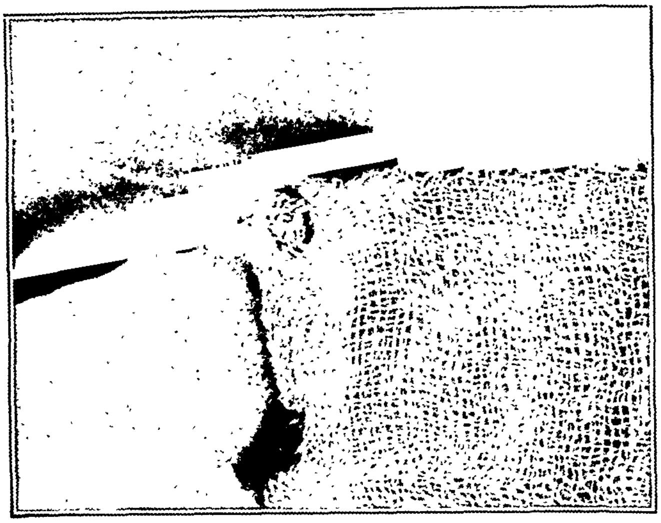

Fig. 2.—Abdominal sponge with ring attached.

With a view to the special marking of all abdominal sponges, I have them made with a metal ring placed around the base of the tape and firmly sewed to both sponge and tape with strong thread. If a sponge is reported missing, the abdomen may be rœntgenographed before it is reopened; the presence of the sponge will be revealed by the metal band. In hospital practice this procedure should be especially applicable, since if after a morning's work a sponge is reported missing and any one of two or three patients may be the unfortunate retainer, roentgenograms may be taken of all of them, and thus a difficult situation is cleared up with a minimum amount of trouble.

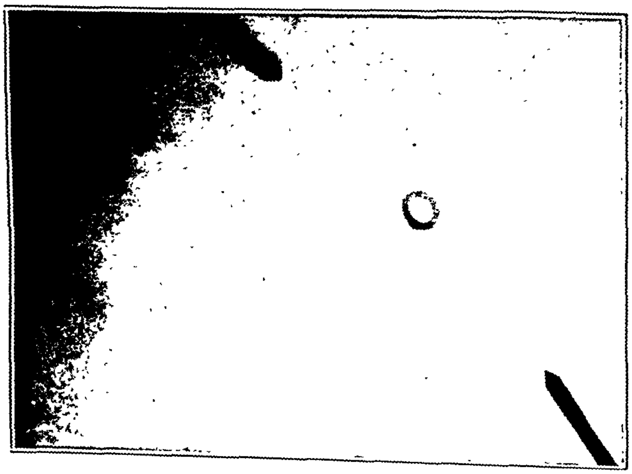

Fig. 3.—Roentgenogram showing sponge through a 200-pound patient.

The Sin of Ignorance.—Every mind was made for growth, for knowledge, and in its nature is sinned against, when it is doomed to ignorance.—Channing.

USE OF SUPERFICIAL JUGULAR VEINS OF NECK FOR INTRAVENOUS INJECTIONS

David J. Kaliski, M.D., New York

Not infrequently the practitioner is confronted with the difficult problem of finding superficial veins for the injection of arsphenamin or other arsenical preparations, saline solution or therapeutic serums, and for use in blood transfusion. To overcome this difficulty, I propose the more extended use of the external jugular veins.

In the majority of thin or muscular persons, especially men, the veins at the bend of the elbow in the cubital fossa are easily visible or palpable and should be chosen. Occasionally after numerous injections of arsphenamin these veins become occluded by thrombosis and are no longer available. In some cases these veins are mere threads and unsuitable for repeated injections. In obese persons, especially women, and occasionally in men and children with poorly developed veins, the operator is at a loss to find a suitable vessel into which to inject. Even the most skilful workers encounter these difficulties in hospital and private practice, and for this reason I have been prompted to describe my method of using the external jugular veins.

This method has been in use in selected cases in the wards of the Mount Sinai Hospital and in private practice, and hundreds of injections have been given without a bad result. The procedure is quite simple, presenting no greater difficulties than puncture of the veins of the arm, is not more painful, and is not attended with any greater danger to the patient. Indeed, up to the present time, I have not seen a single instance of thrombosis of the external jugular after injection of arsphenamin; and in a few instances the same vessel has been punctured repeatedly over a period of more than a year.

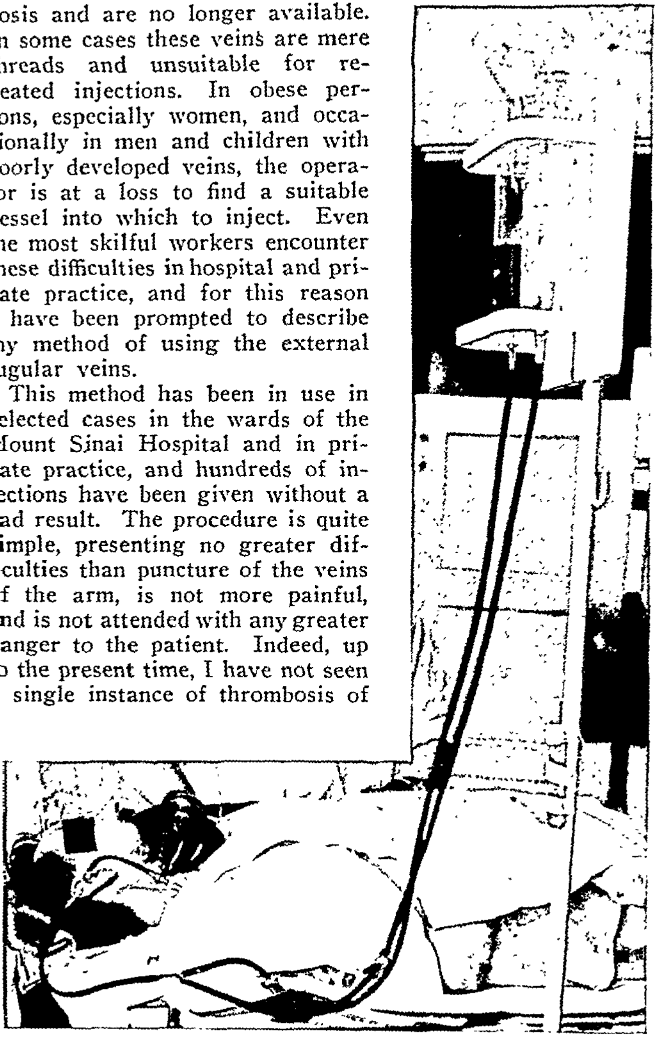

Fig. 1.—Method of making injection into external jugular vein (painted white), and apparatus used by the author.

The external jugular veins arise in the region of the parotid gland, on a level with the angle of the lower jaw, and runs down in the direction of the clavicle. They are not infrequently double, and even in children are good sized vessels. They cross the sternocleidomastoid muscle in its upper part, and run parallel to its posterior border; but there are frequent anomalies in size and position. The vessels terminate behind the clavicle in the subclavian veins. In most instances the vessels are superficial, being covered by the skin, superficial fascia and the thin platysma muscle, and stand out prominently especially on forced expiration or inspiration with compression above the clavicle, or on straining or crying. The anterior jugular veins are also occasionally quite large, especially at their lower part, where they approach and join the external jugulars. They are situated along the anterior border of the sternomastoid muscle.

TECHNIC

The patient reclines on a level table. No pillow is used, the head is turned slightly to one side. Compression may be made over the clavicle with the finger of the left hand in order to make the vein fill up and stand out more prominently while the right hand grasps the needle and pushes it through the skin and into the vein in a downward course in the direction of the vein axis. After practice in the method, almost any type needle may be used; but for greater ease of introduction, a needle with a shield like the writer's needle[1] is preferable. For arsphenamin and other therapeutic injections, a needle with a fairly sharp point, not too large bevel, and about 18 to 20 gage B. & S., about 1¼ to 1½ inches long, is most suitable.

In introducing the needle, the skin over the vein should be gently drawn upward toward the chin. This tends to fix the vein and to allow the needle to pierce the anterior wall of the vessel more easily. The skin of the neck is sometimes quite tough, and therefore the needle should not be too large or too blunt. As the needle enters the vein there is a perceptible "give" as the point enters the lumen. It should be advanced in the vein for about 1 cm. If the needle is properly in the lumen of the vessel, there is observed a slow dropping of blood from the needle, or a drop of blood comes into the hub of the needle (pressure above the clavicle having been removed) and is seen to advance and recede slightly on inspiratory efforts. It should be borne in mind that there is little bleeding from the jugulars compared with the amount of bleeding observed after puncture of a vein in the arm.

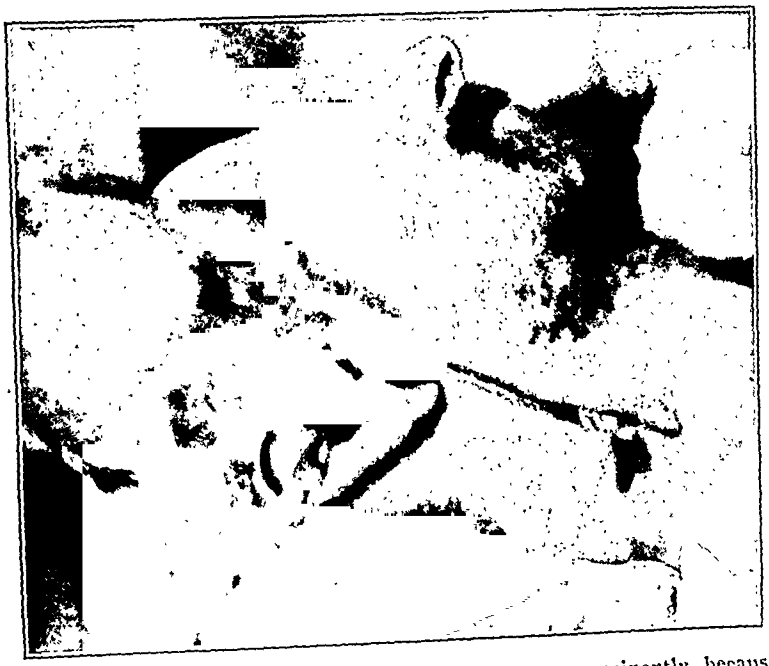

Fig. 2.—The external jugular vein stands out prominently because of fluid that is being injected.

The apparatus best suited for injection is the gravity apparatus, and care should be taken to free the tubing of all air bubbles before beginning the infusion. Saline or water should precede the medicament. If the needle is in the vein properly, the injection will proceed without any pain or infiltration at the site of the puncture. Care should be taken after the fluid has been introduced to remove the needle before the tubing is entirely empty to prevent the entrance of air bubbles. A small glass window made by the insertion of an inch of glass tubing in the rubber tubing near the coupler at the hub of the needle renders this impossible.

The most convenient site for introduction of the needle is in the lower third of the neck, but occasionally the vein is more prominent in the middle third, and the puncture should then be done there.

1070 Madison Avenue.

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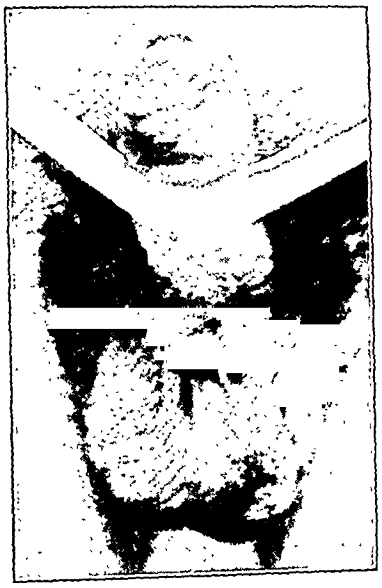
[1] Kaliski, D. J.: A Cannula and Needle for Blood Transfusion and Intravenous Infusions, M. Rec. 87: 482 (March 20) 1915.

CROSS-RACIAL TRANSPLANTATION OF TESTES

FURTHER REPORT OF CASE

G. Frank Lydston, M.D., Chicago

Through the courtesy of Dr. L. L. Stanley, surgeon to the state penitentiary at San Quentin, Calif., I am privileged to report further on Case 9, previously reported,[1] and to present a photograph of the condition of the implanted testes taken three months after the operation.



Condition of implanted testes three months after operation.

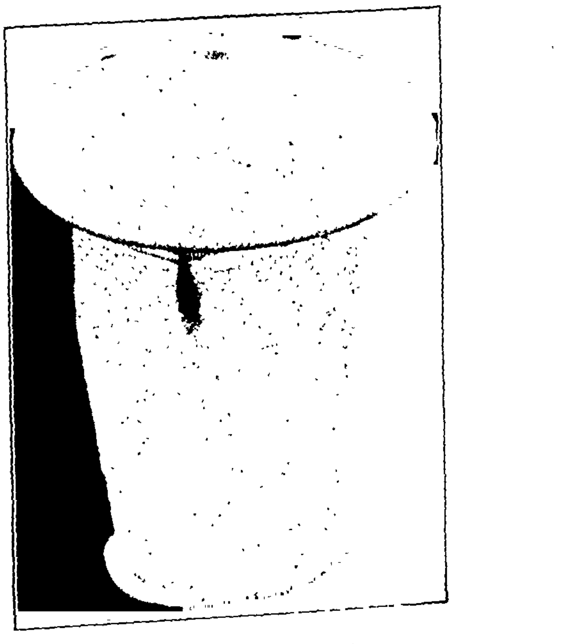
It will be recalled that the glands were taken from the body of a negro who had been hanged for murder, and implanted in the scrotum of a white moron, apparently with remarkable results. Supplementing his previous report, Dr. Stanley writes under the date of February 11, about five months after the operation:

"The testicles in the case, a report of which I gave you, have since atrophied very little, and the patient has improved to a great extent. Several days ago he went out to our 'honor camp,' where prisoners are building highways. This camp is about 200 miles distant from the prison, and I shall not have an opportunity to see him until he returns. He is, however, so far improved physically that he is able to do heavy ordinary labor."

A COFFERDAM INTESTINAL RETRACTOR

R. M. Harbin, M.D., Rome, Ga.

This inexpensive retractor is made in the form of a truncated cone by sewing a section of stocking around pliable copper rings. A dozen or more of different sizes will be found useful in the isolation of infected areas, in reaching inaccessible sources of hemorrhage and facilitating suturing without heavy packing and in searching for lesions causing intestinal obstruction.



Cofferdam intestinal retractor.

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[1] Lydston, G. F.: Further Observations on Sex Gland Implantation, J. A. M. A. 72: 396 (Feb. 8) 1919.

RUPTURE OF A HYPERTROPHIC SPLEEN BY INDIRECT VIOLENCE

Maurice P. Rogers, M.D., Rockford, Ill.

REPORT OF CASE

H. P. S., aged 68, a laborer, was admitted to Rockford Hospital, Nov. 26, 1918, stating that about one hour previously he had fallen into a ditch about 7 feet deep, striking his chest on the rim of the ditch.

At the time of his examination he complained of severe cramplike pain in the left upper quadrant of his abdomen. Slight contusions were found over the right upper thorax. The patient complained of severe tenderness on pressure over nearly the entire abdomen but more pronounced to the left of the umbilicus. There was a marked dulness extending into the flank and nearly to the midline. The pulse was 68; respiration, 20; temperature, 98.6; the urine was negative. Blood examination revealed: erythrocytes, 4,000,000; hemaglobin, 80 per cent.; leukocytes, 9,000. The patient's general condition seemed to be very good.

Under local anesthesia a high left rectus incision was made and on piercing the peritoneum large quantities of dark fluid blood poured through the incision. The patient was then anesthetized with ether and a thorough exploration of the upper abdomen was made. Almost immediately a very large spleen was exposed. On palpation a rupture about 6 cm. in length by 4 cm. in depth was exposed just opposite the hilum. The spleen itself was approximately 24 cm. in length, 12 cm. in width by 6 cm. in thickness and was densely adherent to the posterior parietal peritoneum. It was impossible, because of these dense adhesions, to draw the spleen into the incision without undue violence; consequently a wide gauze pack was pressed firmly into the site of the rupture and brought out through the abdominal incision. The pack was removed on the fifth day and the patient went on to an uneventful operative recovery.

On subsequent inquiry it was ascertained that the patient had had malaria about thirty years previously and that he occasionally still had recurrences of chills and fever.

I believe that we have here a case of rupture of the spleen by indirect violence, since the organ was firmly adherent posteriorly while at its anterior margin it was comparatively free. The patient stated emphatically that he did not strike his abdomen in falling, nor was there any external evidence of violence.

226 South Main Street.

HEMORRHAGE OF THE NEW-BORN—BLOOD TRANSFUSION VIA THE LONGITUDINAL SINUS—RECOVERY

Harry Lowenburg, A.M., M.D., Philadelphia
Pediatrist to the Mount Sinai and Jewish Hospitals, Philadelphia

Baby H., a girl, 2 days old, was admitted to my service at the Mount Sinai Hospital, March 5, 1919, bleeding profusely from mouth, nose and rectum. There was nothing in either the family or the obstetric history which would suggest an etiologic factor. The attending physician, Dr. Charles Mazer, reported that the symptoms were inaugurated by hematemesis on the second day after delivery. The infant was in a weakened state and very pale. The cause of the bleeding was indeterminable. Over the telephone I instructed the intern to administer 10 c.c. of normal horse serum. This was done and, in addition, the infant received some physiologic sodium chlorid solution subcutaneously. I saw the baby the following day. It was still bleeding profusely from rectum and mouth. An examination of the mouth and nose was made by Dr. Arthur W. Watson, who was unable either to discover the cause or to suggest any local therapeutic measure. The patient appeared to be in a moribund state. The skin surface was blanched, the patient appearing to be exsanguinated; the respirations were rapid, shallow and irregular; pulse was accelerated and weak. The heart sounds were rather strong; the temperature was 102. The infant was apparently stuporous. Dissolution seemed to be a matter of minutes. Immediate blood transfusion was decided to be the only means of saving the child's life. The operation was undertaken by Dr. A. I. Rubenstone and myself. It was determined to inject the blood directly into the longitudinal sinus via the posterior angle of the anterior fontanel. The infant was removed to the operating room, the head shaved and iodin applied over the fontanel. About 80 c.c. of whole human blood were transferred from the donor to the infant directly into the sinus.

During the operation, which was concluded as quickly as possible, the patient ceased to breathe and was thought to be dead. Feeble heart sounds were, however, still audible. Eighty c.c. more of blood were injected directly under the skin of the abdomen. Artificial respiration was inaugurated, and after several gasps the respiratory function was established, but it was performed feebly. A bad prognosis was given. However, the color of the baby appeared better and bleeding ceased almost immediately. A second transfusion was contemplated, but proved to be unnecessary, as the general condition and color and weight improved with no other treatment than a properly adjusted artificial food mixture. For a short time the infant ran a somewhat irregular temperature, probably owing to the presence of foreign protein. No rashes, however, developed.

The following blood examinations were made:

March 5, 1919: hemoglobin (Von Fleischl), 20 per cent.; red blood cells, 1,400,000; white blood cells, 12,000; polymorphonuclears, 60 per cent.; small mononuclears, 39 per cent.; large mononuclears, 1 per cent.

March 21, 1919: hemoglobin, 65 per cent.; red blood cells, 2,360,000; white blood cells, 10,000; the differential count was of no interest.

April 1, 1919: hemoglobin, 80 per cent.; red blood cells, 3,600,000; white blood cells, 8,200.

2011 Chestnut Street.

New and Nonofficial Remedies

The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application. W. A. Puckner, Secretary.

ANTIMENINGOCOCCUS SERUM.—(See N. N. R., 1919, p. *270.*)

The Gilliland Laboratories, Ambler, Pa.

Antimeningococcic Serum (Combined Type).—Marketed in ampule packages containing respectively 15 and 30 Cc. also in aseptic glass cylinders containing respectively 15 and 30 Cc. with sterile needle, stylet, and attachments for intraspinal administration.

Dosage: The recommended intraspinal dosage for the treatment of epidemic cerebrospinal meningitis is 5 to 15 Cc. for a child, and 30 Cc. or more for an adult.

Epilepsy Statistics.—Only 3.5 per cent. of epileptics in the United States are cared for in institutions; 200,000 persons in the United States suffer from epilepsy. Only thirteen states have colonies for the care of epileptics. They care for 7,000 patients. Of 1,000 cases studied, one in every three cannot write; one in every four can read and write; only 340 have a common school education; thirty-two have attended night school; four have attended college. Of 500 men studied, one in twenty-five had hemiplegia; of 500 women, one in thirteen had hemiplegia. The most frequent abnormality found at necropsy at both Craig Colony and Monson State Hospital (Mass.) was dilated lateral ventricles. Abnormalities in the pineal gland and the pituitary body have been met with very frequently in the Monson necropsies. Mental deterioration in epileptics is often in direct proportion to the frequency and severity of the convulsions. Proper food, regulated work and routine life lessen the frequency of the convulsions and postpone dementia.—Bull. Mass. Commission of Mental Dis., July, 1918.

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SATURDAY, MAY 31, 1919

THE BRAIN IN EARLY GROWTH

That the central nervous system occupies a superior position in comparison with other tissues of the body is suggested in various ways. Thus it has long been recognized that during a period of starvation the percentage of loss of weight suffered by the brain is far smaller than that suffered by other organs and tissue masses. There are recorded comparative analyses which indicate that even when the entire body experiences a diminution of size represented by far more than a third of its original weight, the decrease in the weight of the brain rarely amounts to 8 per cent. In fact, in young animals at the period of active growth, the brain weight may actually increase during a severe underfeeding which checks the increment of the organism as a whole.

Another unique feature of the central nervous system is exemplified in the early completion of its fundamental morphologic organization. The most detailed information of such facts has been derived from studies on lower mammals, such as the rat; but there are many reasons for assuming that the results obtained with this species correspond, with due allowance for differences in age and size, to the sequence of changes that proceeds in the human organism. Hence we may refer with some assurance to a recent study by Sugita[1] at the Wistar Institute of Anatomy in Philadelphia on the precocious organization of the cerebral cortex. He informs us that the size of individual cortical nerve cells, the total number of cortical cells, and the thickness of the cortex, all attain nearly their full values at the same time and very early in life (corresponding to the weaning time in some species), after which the maturation of internal structures of the cell body and the nucleus continues. The brain weight and the cortical volume continue to increase even after this stage throughout the postnatal life, though not so rapidly as during the early period. This later growth is due principally to the development of the cell attachments, intercellular tissues (neuroglia tissue and blood vessels), and the ingrowth of axons into the cortex and their myelinization, which together separate the cells from each other and cause an increase in cortical volume.

The facts now established that the cortex of the brain becomes provided very early in life with nearly all of the cellular elements necessary to it at maturity, and that the changes incident to growth are essentially those of enlargement of the cell bodies, growth of axons, and myelinization, help to explain the early completion of cerebral organization. According to Donaldson[2] and Sugita,[3] the human cortex should have attained nearly its full thickness at about the age of 15 months, when cell multiplication and the migration of cells into the cortex have come practically to an end.

Recent evidence further indicates that although underfeeding and partial starvation may retard the growth of the cortical cells in size and the formation of myelinated fibers, the number of neurons remains unmodified.[4] This makes it increasingly more likely that each species has in its nervous system a characteristic number of neurons—a number which is constant within the limits of biologic variation. Hence the somewhat smaller weight and size occasionally found for the brain of undernourished individuals is due to an arrest in the growth and development of the constituent neurons, and not to a decrease in their number.

Donaldson has well represented the significance of such studies on the early development changes in the brain. Commenting on the fact that the cerebral cortex has attained its thickness at 15 months of age so that it must later undergo a large increase in area without any significant change in thickness, he[2] remarks: "All this shows that the important events in the postnatal growth of the nervous system occur early in life, and this in turn emphasizes the paramount importance of favorable conditions during the first three years of childhood."

THE SYSTEMIC EFFECTS OF SEVERE EXPOSURE TO ROENTGEN RAYS

Prolonged exposure to roentgen rays may be followed by a marked general systemic or constitutional reaction as well as by the more familiar epithelial symptoms known as skin burns. The dermatitis of the latter sort was the first of the manifestations to be discovered and described; but it is by no means always the more serious or even the more conspicuous effect. In recent times more particularly, the improved tubes in use have made it possible to administer "massive doses" to structures beneath the skin so that the latter will escape the danger of a burn.

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[1] Sugita, N.: Comparative Studies on the Growth of the Cerebral Cortex, VIII, General Review of Data for the Thickness of the Cerebral Cortex and the Size of the Cortical Cells in Several Mammals, Together with Some Postnatal Growth Changes in These Structures, J. Comparative Neurol. **29**: 241, 1918.

[2] Donaldson, H. H.: Growth Changes in the Mammalian Nervous System, the Harvey Lectures 1916-1917, Philadelphia, J. B. Lippincott Company, p. 113.

[3] Sugita, N.: Comparative Studies on the Growth of the Cerebral Cortex, II, On the Increase in the Thickness of the Cerebral Cortex During the Postnatal Growth of the Brain, J. Comparative Neurol. **28**: 511, 1917.

[4] Sugita, N.: Comparative Studies on the Growth of the Cerebral Cortex, VII, On the Influence of Starvation at an Early Age on the Development of the Cerebral Cortex, J. Comparative Neurol. **29**: 177, 1918.

The clinical symptoms of the systemic reaction in the interior of the body resemble somewhat an acute intoxication. They include extreme prostration, together with such gastro-intestinal symptoms as vomiting and diarrhea. Edsall and Pemberton,[1] who were among the first to attempt a scientific elucidation of these constitutional symptoms, regarded them as due to a sudden demand on the organism for the complete disintegration and excretion of a large amount of the products of tissue breakdown. They assume an inability on the part of the organism to accomplish this in these cases, and a consequent "halting of metabolism," resulting in an intoxication produced by incompletely disintegrated tissue remnants.

More recently, Hall and Whipple[2] have conducted highly desirable experimental investigations at the University of California Medical School on the general constitutional reaction which follows prolonged exposure to the roentgen rays of the Coolidge tube. They are inclined to classify the effects under the caption of "nonspecified intoxications," making them comparable with the conditions observed in intestinal obstruction or in acute pancreatitis, for example. Bacteria and specific toxins or antibodies cannot be concerned in the roentgen-ray effects. Conspicuous among the metabolic phenomena is the marked increase in the urinary nitrogen output and also in the nonprotein nitrogen of the blood.

All observers agree that there is increased breakdown of body protein in consequence of severe roentgen-ray treatment. But how is the accumulation of the disintegration products in the blood to be accounted for? Is kidney irritation an accompanying manifestation? Thus far there has been no convincing indication of the existence of a roentgen-ray nephritis. The only abnormality of a gross sort discovered in the more recent investigations is a probable epithelial injury in the intestinal mucosa. Hall and Whipple assert that in the fatal cases the epithelium lining the intestinal crypts may show actual necrosis and invasion of polymorphonuclear leukocytes. They affirm that this epithelium also shows a remarkable speed of autolysis, and may vanish by self-digestion within a few hours postmortem.

If the observations of the California investigators on the sensitiveness of the small intestine to large doses of roentgen rays are correct, the injury noted may serve to explain the general intoxication attended with gastro-intestinal symptoms. Whipple is, further, inclined to correlate the clinical picture of fatal roentgen-ray intoxication with that which he and his co-workers[3] have described as that of acute intestinal obstruction. As he maintains, death may take place at about the same interval after the initial injury or obstruction. Violent gastro-intestinal disturbances dominate the picture in both conditions, and there is every evidence of great tissue injury and increased tissue catabolism. In each case the intestinal epithelium seems to be involved.

What is now known of the effects of the roentgen rays used in therapeutic doses thus seems to justify their designation as a "nonspecific" reaction. It may be that the primary action is on the tissue proteins so as to form cleavage products which are further toxic to the organism; just as in a heat burn, harmful products are found and, being absorbed, induce signs of intoxication. The widespread employment of roentgen-ray therapy forms a sufficient justification for more profound investigation of the metabolic phenomena of the procedure. Only in this way can its dangers and its possible unsuspected "nonspecific" therapeutic potencies be ascertained.

THE PHYSIOLOGY OF STAMMERING

The dictionary defines stammering or stuttering as consisting in making involuntary stops in uttering syllables or words—a halting, defective utterance. Fortunately the time has gone by when any except the most inerudite regard stammering as primarily due to an anatomical defect of the mouth or the throat. It has become clear that the nervous system is in some way responsible. Various systems of overcoming stammering have been introduced with considerable success. The greatest promise of controlling this most embarrassing interruption of speech lies in ascertaining, first of all, precisely what physiologic and psychologic factors enter into and condition its manifestations.

Bluemel[4] has defended the hypothesis that stammering is the result of cerebral congestion. There is reason to believe that such a circulatory disturbance affects speech as readily or even more easily than it does any other activity. The cerebral congestion is assumed, on Bluemel's theory, to blur verbal imagery, especially auditory verbal imagery. A transient auditory amnesia in the auditory speech center makes it "impossible for the stammerer to recall, for the time being, a part or the whole of the word he wishes to speak at the moment he has to say it."

Fundamental in establishing the validity of the views just set forth is the demonstration that cerebral congestion actually occurs in the process of stammering. Every one knows from casual observations that stammering may be induced or accentuated in susceptible persons by emotional states. Such psychic disturbances are, furthermore, demonstrably accompanied by vasomotor changes. Experiments have been reported to show that certain forms of shock, i. e., responses to unexpected psychic stimuli, are always accompanied by vasoconstriction in the peripheral blood vessels and by vasodilatation in the brain. The evidence has been obtained by studying the circulation simultaneously in a limb and through a trephine wound in the skull. Postulating that the interrelation between peripheral vasoconstriction and cerebral vasodilatation has a more general validity, Robbins[2] has studied the peripheral circulatory changes in stammerers at the Harvard Psychological Laboratory. Comparing them with normal persons he found in stammerers approximately the same vasoconstriction at the periphery as has been recorded for the sudden stimuli popularly called shocks. Thus, when an unexpected sound, a harsh command, or a cause of fright initiated the familiar inability at verbal expression, plethysmographic records of the finger or arm invariably showed a vasoconstriction. Robbins summarizes: "Long stimuli are accompanied by greater vasoconstriction and slower recovery than are short stimuli. . . . The more intense the stimulus and the more unexpected the stimulus, the greater is the vasoconstriction, the more rapid the vasoconstriction and the slower the recovery. . . . The greater the vasoconstriction, the more is verbal imagery impaired. . . . Those subjects who experience the greatest vasoconstriction during shock and stammering also require the longest time for recovery." Robbins' records show that "peripheral vasoconstriction continues throughout the stammering interval; if any vasomotor change accompanies normal speech it is vasodilatation in a large majority of periods." Furthermore, "fear of stammering with no attempt at speaking produces vasoconstriction in the periphery as does actual stammering. Stammerers cannot speak without hesitancy during vasoconstriction."

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[1] Edsall, D. L., and Pemberton, R.: The Nature of the General Toxic Reaction Following Exposure to the X-Rays, Am. J. M. Sc. **133**: 426, 1907.

[2] Hall, C. C., and Whipple, G. H.: Roentgen-Ray Intoxication: Disturbances in Metabolism Produced by Deep Massive Doses of the Hard Roentgen Rays, Am. J. M. Sc. **157**: 453, 1919.

[3] Whipple, Cooke and Stearns: J. Exper. M. **25**: 479, 1917.

[4] Bluemel, C. S.: Stammering and Cognate Defects of Speech, New York, 1913.

The deduction, from these experiments, that stammering, like fright and other forms of "mental shock," is accompanied by cerebral congestion has a high degree of probability but still requires actual demonstration. A satisfactory solution could doubtless be found if it were possible to conduct observations, as Robbins hopes to do, directly on the brain of some stammerer who has been trephined. Meanwhile we may recall, by way of analogy that persons often "lose their heads" through fright, becoming unable during the cerebral congestion to perform muscular efforts of a variety of sorts with customary efficiency. In a practical way it may be helpful to bear in mind the following logic of Robbins:

> As vowels are governed primarily by auditory imagery they are the stammerers' bugbears. The stammerer prolongs continuous consonants for seconds and repeats closed consonants over and over until able to recall the vowel that follows. The more the vowel is inhibited, the harder he forces out the preceding consonant, the more he thereby increases cerebral congestion, the more impossible it becomes to recall the vowel, and the worse he stammers. Many stammerers are thus led to believe that their trouble lies with the consonants they thus overdo and, by concentrating their mind on trying to force out these consonants, they keep the mind from recalling the vowel which fails to come promptly, and thus they increase their stammering.

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ins, S. D.: A Plethysmographic Study of Shock and Stam- ve. J. Physiol. **48**: 285, 1919.

THE STUDY OF BACTERIAL NUTRITION

The bacteria have at length acquired a position in the domain of research which takes them beyond the elementary stage of systematic classification. It is no longer fashionable or profitable merely to arrange the different micro-organisms in an orderly scheme whereby they can be identified; nor does the young science of bacteriology content itself solely with the search for microbial agents of disease or the mere descriptions of varied bacterial floras. Biologic chemistry has made an inroad into the field, bringing along the modern conceptions that have enhanced the study of the functions of living organisms. Hence one reads today of studies in bacterial metabolism.

It has already been pointed out in The Journal[1] that a great advantage would be gained if the nutrient needs and the metabolic functions of bacteria were better known. Given the possibility of regulating the composition of culture mediums in accord with the precise needs of the organism, it would no longer be necessary to depend on such uncertain products as imported "peptone" of unknown composition, or crude decoctions of tissues of indefinable make-up for the successful cultivation and identification of bacteria. It is now understood, particularly through the studies of Rettger[2] and his pupils at Yale University, that purified unaltered proteins are resistant to bacterial attack, probably because their complex structure renders them unfit for immediate utilization. Not so, however, in the case of simpler nitrogenous compounds. Recent investigations[3] indicate that many species of bacteria are able to synthesize their own protoplasm from a very simple amino-acid like glycocoll, and thus utilize it as readily as more complex representatives, such as tryptophan, on which animal organisms are so dependent. A number of organisms have already been shown to be capable of passing through many successive cultures in an amino-acid medium without any diminution of luxuriance or rapidity of development. Most of them can even initiate development as readily on diammonium phosphate as on the amino compounds. Combinations of the latter apparently possess little advantage over any one of the individual amino-acids.

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[1] The Resistance of Pure Proteins to Bacterial Decomposition, editorial, J. A. M. A. **65**: 257 (July 17) 1915; Newer Aspects of Bacterial Metabolism, ibid. **67**: 1448 (Nov. 11) 1916; The Nutrition of Bacteria, ibid. **71**: 466 (Aug. 10) 1918.

[2] Sperry, J. A., and Rettger, L. F.: The Behavior of Bacteria Toward Purified Animal and Vegetable Proteins, J. Biol. Chem. **20**: 445, 1915. Rettger, L. F.; Berman, N., and Sturges, W. S.: Further Studies on Bacterial Nutrition: The Utilization of Proteid and Nonproteid Nitrogen, J. Bacteriol. **1**: 16, 1916.

[3] For a review of the subject, compare Koser, S. A., and Rettger, L. F.: Studies in Bacterial Nutrition: The Utilization of Nitrogenous Compounds of Definite Chemical Composition, J. Infect. Dis. **24**: 301 (April) 1919.

Such researches, in a field in which scarcely more than the beginning has yet been made, greatly simplify the problem of the accurate study of bacterial nutrition. They by no means demonstrate, however, that the character of the nutrition, that is, the environment, of the micro-organism has no influence on the nature of the bacteria. Diehl[4] of the Department of Bacteriology at the University of Minnesota, has recently reported that on a medium containing no organic nitrogen, proteolytic enzymes are not formed by bacteria. The results with mediums containing amino-acids are varied. Diehl contends that the proteolytic enzymes are not preformed in the bacterial cell but are dependent on the nature of the substrate on which it grows. They are conceived to be specific for the amino-acids that go to make up proteins. If these speculations prove to be correct, they may help to explain the supposed occasional aberrant appearance of strains of bacteria—an irregularity which in the light of the new hypothesis might never appear if the chemical composition of the nutrient medium were always identical. Furthermore, as Diehl says, such differences in nutrient environment may help to account for many of the unverified "new strains" of bacteria, the differentiation of which is based on some minor phase of their action on culture mediums.

Current Comment

THE FUNCTIONS OF THE CELL NUCLEUS

Ever since the first description of the nucleus of a cell by Robert Brown in 1831, morphologists have been inquisitive regarding its purpose. That it is of fundamental importance, nobody doubts. Unquestionably the nucleus forms a part of the physical mechanism of inheritance. As to its rôle in the everyday performances of the living cell, it has been conjectured that the nucleus is concerned with the growth and synthesis of new protoplasm, or again that it is the center of the all-important oxidative processes of the organism which are now recognized to proceed in the cells rather than the circulating fluids of the body. Commenting on the evidence respecting these two hypotheses, Lynch[5] has remarked that the assumption that the organ which is farthest removed from the supply of oxygen is the organ of oxidation is not probable. In experiments conducted in the physiologic laboratory of the Johns Hopkins University, he has compared the behavior of cells (amebas) from which the nucleus has been removed with those containing this structure intact. Lynch observed that the enucleated structure may move, respire, digest, respond to stimuli, and exhibit any activity that is dependent solely on catabolic or destructive processes of protoplasm. The group of phenomena which it never shows are those of growth and of regeneration and division. As the phenomena of growth are essentially those of organic synthesis, he concludes that the dependence of growth on the nucleus implies the dependence of organic synthesis on the nucleus. Such speculations cannot fail to be engrossing when one stops to recall that our entire body is, after all, essentially a myriad of nucleated cells. For pathology it is highly important to understand the possibilities of function in the various parts of cells, so that the efforts to prevent abnormal cellular metamorphoses may be more intelligently directed.

CYANOSIS IN INFLUENZA

Cyanosis has been a constant and striking manifestation in the recent epidemic of influenza and bronchopneumonia. It occurs early in the disease and is apparently not associated with enlargement of the right heart, even in advanced cases. The emphysema of the lungs which develops as the lung involvement extends may be a causative factor in some instances but apparently not in the early stages. As the color of the skin suggests a lack of oxygen, artificial respiration, as well as oxygen inhalations, have been tried with the view of relieving the cyanosis but without success. Harrop[1] has studied the behavior of the blood of influenza infections toward oxygen. He found the oxygen content and oxygen unsaturation to give normal values in uncomplicated cases of influenza. The oxygen unsaturation of the blood is a measure of that part of the hemoglobin whose oxygen-combining power is not fully saturated. It is determined by obtaining the difference between the oxygen content of venous blood and the total oxygen-combining power of the hemoglobin. Harrop says also that "in none of the cases of bronchopneumonia which recovered, and not until terminal collapse in fatal cases, has the venous oxygen content or the amount of oxygen unsaturation been abnormal." The values seemed to be independent of the temperature, the respiration and the extent of lung involvement. These results would seem to explain the uselessness of oxygen inhalation in these cases. Attention has also been directed to methemoglobin since the presence of this substance in the blood is a well-known cause of cyanosis. It is known that methemoglobin contains the same amount of oxygen as hemoglobin, but that it is combined differently, forming a more stable compound which cannot be dissociated by a vacuum. On this account, methemoglobin is not able to act as an oxygen carrier. While the observations of Harrop indicate that the oxygen content and oxygen unsaturation give normal values in influenza, the question still remains whether or not the blood has undergone any chemical change which decreases the oxygen carrying power. In an endeavor to answer this question for pneumonia Butterfield and Peabody[2] demonstrated that methemoglobin is formed when the pneumococcus is grown in

[4] Diehl, H. S.: The Specificity of Bacterial Proteolytic Enzymes and Their Formation, J. Infect. Dis. **24**: 347 (April) 1919.

[5] Lynch, V.: The Function of the Nucleus of the Living Cell, Am. J. Physiol. **48**: 258, 1919.

[1] Harrop, Jr., G. A.: On the Behavior of the Blood Towards Oxygen in Influenza Infections, Bull. Johns Hopkins Hosp. **30**: 10, 1919.

[2] Butterfield, E. E., and Peabody, F. W.: The Action of the Pneumococcus in Blood, J. Exper. M. **18**: 587, 1913.

Medical Mobilization and the War

Deaths in the Army

The *United States Bulletin* of May 19, published the following statement regarding the number of deaths in the United States Army, from the beginning of the war to the various dates recorded:

	From Disease	Battle	Other Injury	Total
In United States, to April 18, 1919.....	33,537	......	822	35,359
In France, to April 23, 1919...........	22,996	48,068	4,536	75,600
In Archangel, Russia, to April 21, 1919.	67	100	4	171
In Siberia, to April 18, 1919..........	39	......	10	49

Wounded Slightly

In the issue of the *U. S. Bulletin* of May 8, it was reported that the following medical officers had been wounded slightly: Malcolm Newlon, Lieut., M. C., U. S. Army, Lincoln, Kan., and Lacy W. Corbett, Lieut., M. C., U. S. Army, Bishopville, S. C.

Influenza on Transport

On board the *Martha Washington,* which sailed from Pauillac, France, May 7, and arrived in Newport News, Va., May 19, with 3,013 soldiers, fifty-seven cases of influenza developed and the entire passenger list was placed in isolation for five days.

Medals of Honor Awarded

Frederick P. Reynolds, Col., M. C., U. S. Army, and Royal Reynolds, Lieut.-Col., M. C., U. S. Army, have been awarded the French Medaille d'Honneur das Epidemies at the American Red Cross Hospital No. 112, Auteuil, France.

Distinguished Service Order Given

George P. O'Malley, Capt., M. C., U. S. Army, Cleveland, was recently awarded the Distinguished Service Order by the British government.

Awards of Distinguished Service Cross

By direction of the President, the distinguished service cross was awarded by the commanding general, American Expeditionary Forces, for extraordinary heroism in action in Europe, to the following named officers and enlisted men of the American Expeditionary Forces:

THOMAS B. GOLD, first lieutenant, Medical Corps, 119th Infantry, Lawndale, S. C. For extraordinary heroism in action near Busigny, France, Oct. 9, 1918, and Mazinghien, France, Oct. 18-19, 1918. During the attack of October 9, he established his first aid post in a roadside shrine up with the front line, where he rendered valuable service to the wounded. On another occasion he established alone a post close to the front line, where he again gave treatment until the heavy fire of the enemy forced him to withdraw. During the advance of October 18-19, he established another front line post under the enemy fire and thus saved the lives of many of the troops.

GEORGE W. CRILE, Lieut.-Col., M. C., U. S. Army, commanding the Lakeside Hospital Unit, Cleveland, and later consulting specialist for the American Expeditionary Forces. The citation states: "By his skilled researches and discoveries he saved the lives of many wounded soldiers. His tireless efforts to devise new methods of treatment to prevent infection and mental shock revolutionized army surgery and met with great success."

American Red Cross Mission Arrives in Siberia

The American Red Cross Siberian Commission arrived in Vladivostok on April 28. Among the American members are Drs. J. Rudis-Jicinsky, V. Anyz, G. Cepelka, Chicago, and G. W. Davis, Kansas City. It is under the leadership of Dr. Teusler. The commission consists of four physicians, fourteen nurses and a pharmacist. Drs. Rudis-Jicinsky and Anyz have been detached and sent to Omsk to fight typhus fever and to aid the Czecho-Slovaks along the Siberian railway.

French Decorate Naval Officers

For bravery in action with the United States forces in the Champaign offensive near Rheims, in October, 1918, Lieut.-Com. Joel T. Boone, M. C., U. S. Navy, was decorated, April 28, by the acting secretary of the Navy, with the Croix de Guerre with Palm. The decoration followed congratulatory expression of appreciation by the acting secretary and Surg.-Gen. William C. Braisted, U. S. Navy. Commander Boone's remarkable war record is shown by the following summary of his citations and awards: cited for American Distinguished Service Cross, in June in the Belleau Woods action; in September at Thiaucourt in the St. Mihiel offensive, and October in the Champagne offensive. He was cited for French decoration in July in Soissons offensive, and in October in the Champagne offensive. He was cited for Medal of Honor in December in the Soissons action and on account of the general revise of his acts. He was cited in Divisional Orders No. 44, Second Division, in July for acts in Belleau Woods. The citation for which the French decoration was awarded Commander Boone was as follows: "Between Oct. 2 and 10, 1918, this officer was constantly circulating among the attacking companies, directing with success and the greatest coolness the evacuation of the wounded from the battlefield under heavy artillery and machine gun fire. He showed at all times an utter disregard of personal safety, his fearless behavior being a splendid example to those about him. This work was maintained over a period of nine days until the last relief had taken place."

HONORABLE DISCHARGES, MEDICAL CORPS, U. S. ARMY

Note.—In the following list, L. signifies lieutenant; C., captain; M., major; L. C., lieutenant-colonel; Col., colonel, and B. G., brigadier-general.

ALABAMA

Bessemer—Harris, C. A. (C.)
Birmingham—Murphy, G. E. (C.)
Grand Bay—Fort, M. A. (L.)
Opelika—Moore, G. H. (C.)
Porter—Denman, H. J. (C.)
Seale—Prather, J. (C.)
Tuscaloosa—Searcy, H. B. (C.)

ARIZONA

Globe—Horst, W. W. (L.)
Phoenix—Bakes, E. C. (C.)
Seligman—Cartmell, F. H. (L.)
White River—Parlett, R. V. (L.)

ARKANSAS

El Paso—Bruce, W. H. (L. C.)
Little Rock—Mobley, A. L. (C.)
Osceola—Harwell, W. R. (L.)
Proctor—Wilson, T. (C.)
Richwoods—White, W. H. (M.)

CALIFORNIA

Berkeley—Allen, W. B. (C.)
  Callnon, J. W. (C.)
  Thomson, H. S. (M.)
Eagle Rock—Dirks, C. B. (C.)
Ferndale—Bruner, F. M. (C.)
Fresno—Sweet, C. D. (L.)
Fullerton—Wickett, W. H. (C.)
Lemon Cove—Montgomery, R. B. (C.)
Los Angeles—Alter, S. M. (C.)
  Fisher, J. T. (C.)
  Germann, A. C. (L.)
  Hagan, R. (C.)
  Loomis, M. L. (C.)
  Schroeter, O. V. (C.)
  Waller, G. P., Jr. (M.)
Palo Alto—Green, H. R. (C.)
San Francisco—Eames, E. (L.)
  Fisher, A. L. (C.)
  Sampson, W. A. (M.)
  Schlageter, H. J. (L. C.)
  Summersgill, H. T. (L. C.)
  Tolman, G. P. (C.)
  Young, J. A. (C.)
Santa Ana—Brothers, H. N. (C.)
Stockton—Friedberger, W. (M.)

COLORADO

Denver—Johnson, R. W. (L.)
  Wood, N. A. (C.)
Lamar—Knuckey, C. T. (C.)
Pueblo—Block, L. (C.)
  Halley, W. H. (L.)
Somerset—Earle, J. R. (C.)
Victor—Elliott, C. E. (C.)

CONNECTICUT

Bridgeport—Calvin, C. V. (L.)
Bristol—Richardson, R. A. (L.)
Clinton—Wellman, G. O. (L.)
East Hartford—Truex, E. H. (C.)
Hartford—Bancroft, H. A. (L.)
  Sweet, J. H. T., Jr. (L.)
New Britain—Dalton, G. H. (C.)
Unionville—Flynn, W. H. (L.)
Waterbury—Healey, T. F. (C.)
  Spicer E. (L.)
Willimantic—ONeil O. (C.)

DELAWARE

Seaford—Manning H. M. (L.)

DISTRICT OF COLUMBIA

Washington—Adams R. D. (M.)
  Bell, W. J. (L. C.)
  Caylor, C. C. (C.)
  Moore, T. V. (M.)
  ONeil, D. G. (L.)
  Van Rensselaer, J. (C.)
  Weaver, C. R. (L.)
  Wilmer, W. H. (Col.)

FLORIDA

Dania—Parrish, T. E. (L.)
Jacksonville — Manning, W. S. (C.)
Palmetto—Vaughan, B. E. (C.)

GEORGIA

Ashburn—Harris, H. W. (C.)
Atlanta—Battey, H. I. (L.)
  Boland, F. K. (L. C.)
  Daly, L. P. (C.)
  Pruitt, M. C. (M.)
Lawrenceville—Kelley, D. C. (L.)
Macon—McAfee, L. C. (C.)
Newman—Peniston, J. B. (C.)
Plaing—Wise, S. P. (L.)
Sasser—Akridge, H. L. (C.)
Savannah—Crawford, W. B. (M.)
Stillmore—Graham, R. E. (C.)
Valdosta—Dunaway, C. E. (C.)
Whigham—Brawner, L. E. (L.)

IDAHO

Kamiah—Bryan, C. H. (C.)
Lewiston—Braddock, E. G. (C.)

ILLINOIS

Barrington—Weichelt, C. V. A. (L.)
Batchtown—Fiedler, F. W. (L.)
Beardstown—Kunz, F. O. (L.)
Cairo—Weber, C. L. (M.)
Champaign—McKinney, C. D. (L.)
Chicago—Albers, E. H. (L.)
  Anderson, J. V. (L.)
  Benkendorf, B. (L.)
  Blatchford, F. W. (M.)
  Bloomfield, J. H. (C.)
  Brooks, J. E. (L.)
  Buckley, J. (L.)
  Chapman, F. A. (M.)
  Christiansen, H. (L.)
  Desser, A. L. (L.)
  Friedberg, S. A. (M.)
  Greensfelder, L. A. (M.)
  Gross, W. A. (L.)
  Hall, M. W. (C.)
  Hirsch, E. F. (C.)
  Horner, C. P. (C.)
  Horner, D. A. (M.)
  Johannes, P. C. W. (C.)
  Kahn, J. V. (L.)
  Krost, G. N. (C.)
  McClave, A. W. (C.)
  Miller, J. W. (L.)
  OMalley, J. G. (C.)
  Perrill, I. (M.)
  Rosenbaum, L. W. (C.)

Chicago—Ryan, A. F. (L.)
Schmidt, E. R. (C.)
Schroeder, G. H. (C.)
Shacoff, H. (L.)
Small, A. A. (L. C.)
Stern, L. H. (L.)
Stevens, C. A. (L. C.)
Suker, G. F. (M.)
Sullivan, W. J. (C.)
Unger, L. (C.)
Washburn, A. M. (C.)
Windell, U. G. (C.)
Chicago Heights—Cusick, G. W. (L.)
Chrisman—Kerrick C. L. (L.)
Collinsville—Burroughs, L. G. (L.)
Decatur—Redmon, J. (L.)
Thompson, J. C. (C.)
Des Plaines—Purves, A. M. (C.)
East St. Louis—Boyd, T. V. (M.)
Ellsworth—Johnston, J. K. (L.)
Granite City—Purnell, E. A. (C.)
Nebo—Pollock, J. R. (L.)
New Boston—Childs, C. F. (C.)
Newman—Valentine, J. A. (C.)
Oak Park—Bivins, B. W. (C.)
Peru—Provost, B. W. (L.)
Rockford—Porter, J. R. (C.)
Scotland—Jennings, J. F. (C.)
Watseka—Buckner, W. F. (L.)
West Frankfort—Webb, B. H. (L.)
Zeigler—Gates, L. V. (L.)

INDIANA

Attica—Burlington, J. R. (C.)
Elkhart—Elliott, L. A. (C.)
Evansville—Cody, B. L. I. (L.)
Fort Wayne—Beall, C. G. (C.)
Hartford City—Buckles, H. L. (L.)
Holland—Baker, H. M. (M.)
Huntington—Clokey, M. C. (C.)
Indianapolis—*Hurt,* P. T. (C.)
Kime, E. N. (L.)
La Bonte, N. (L.)
Walker, F. C. (L.)
Lexington—Matthews, C. B. (C.)
Logansport—Shultz, H. M. (C.)
Millersburg—Simmons, L. H. (L.)
Monroeville—Steinman, H. E. (L.)
Mulberry—Troxell, E. C. (C.)
Rensselaer—Johnson, C. E. (C.)
Rockville—Bradenberger, E. G. (L.)
Star City—Johnston, E. E. (C.)
Union City—Reid, R. W. (L.)
Voisinet, R. A. (M.)
Vallonia—Richards, P. (L.)
Valparaiso—Gowland, H. E. (L.)

IOWA

Algona—Hartman, E. C. (C.)
Charles City—Griffin, W. L. (C.)
Clear Lake—Phillips, A. B. (C.)
Corydon—Walker, B. S. (C.)
Council Bluffs—Cobb, H. A. (C.)
Davenport—Lamb, F. H. (C.)
Des Moines—Gilpin, G. S. (L.)
Will, F. A. (C.)
Yates, G. S. (L.)
Dubuque—*Fritz,* L. H. (C.)
McGuire, C. A. (M.)
Fairfield—James, L. D. (C.)
Independence—Tidball, C. W. (L.)
Iowa City—Beye, H. L. (C.)
Mason City—Fitzpatrick, M. J. (L.)
Marston, C. L. (M)
New London—Mehler, F. R. (L.)
Nora Springs—Banton, O. H. (C.)
Red Oak—Seabloom, J. L. (C.)
Sioux City—Schott, H. J. (C.)

KANSAS

Augusta—Pattison, J. F. (C.)
Bronson—Lambeth, G. S. (C.)
Columbus—Baxter, L. W. (C.)
Horton—Reynolds, L. (C.)
Kansas City—May, J. W. (C.)
Manhattan—McCullough, W. A. (C.)
Marysville—Close, J. B. (L.)
Thayer—Sherman, J. N. (M.)
Topeka—Brown, E. G. (C.)
Millard, S. T. (M.)
Wichita—Carter, W. H. (C.)
Frost, E. J. (L.)

KENTUCKY

Ashland—Layne, P. C. (C.)
Bratton—Stevenson, J. M. (C.)
Corinth—Foreman, W. P. (C.)
Glasgow—Howard, C. C. (L.)
Hitesville—Griggs, G. D. (C.)
Hopkinsville—Thomas, F. P. (C.)
La Grange—Blaydes, H. B. (C.)
Lancaster—Edwards, J. E. (L.)
Lexington—Juett, F. L. (C.)
Louisville—Abell, I. (L. C.)
Abraham, D. E. (C.)
Frank, L. W. (C.)
Neblett, L. W. (L.)
Maysville—McClanahan, C. W. (M.)
Mortons Gap—Davis, A. W. (C.)
New Liberty—Purdy, G. (C.)

LOUISIANA

Baton Rouge—McKowen, J. (C.)
Clarks—Sherman, D. O. (C.)
Jena—Coleman, J. A. (C.)
Monroe—Hirsch, D. I. (C.)
New Orleans—Danna, J. A. (L. C.)
Fuchs, V. H. (L.)
Gage, I. M. (L.)
Gondolf, H. J. (L.)
Hebert, L. A. (L.)
Hountha, J. M. (L.)
Kearney, H. L. (C.)
McGowan, R. P. (L.)
Moss, E. (L. C.)
Patton, W. T. (C.)
Signorelli, J. (L.)
Oscar—Major, E. L. (C.)
Welsh—Martin, C. A. (M.)

MAINE

Bangor—Bliss, R. V. (C.)
Farmington—Pratt, G. L. (C.)
Portland—Davis, P. W. (C.)
Hayward, J. A. (C.)
Josselyn, R. B. (C.)
Shanahan, W. H. (C.)
Tibbetts, G. A. (C.)
Vanamee, T. O. (L. C.)
Saco—Willard, L. E. (C.)

MARYLAND

Annapolis—Hopkins, W. H. (C).
Baltimore—Davis, D. M. (M.)
Duffy, W. C. (L.)
Hall, E. G. (L.)
Harrison, A. C. (L. C.)
Holmes, L. P. (L.)
Marino, F. C. (L.)
McConachie, A. D. (M.)
Peters, D. P. (L. C.)
Rankin, F. (M.)
Stein, H. M. (L.)
Streett, D. C. (C.)
Walker, A. C. (C.)
Warring, F. C. (L.)
Weed, L. H. (C.)
Wolford, R. A. (L.)
Zadek, I. (L.)
Corbett—Payne, T. R. (C.)
Cumberland—Cavanaugh, L. M. (C.)
Hagerstown—Hoffmeiser, F. N. (C.)

MASSACHUSETTS

Attleboro—O'Dea, P. J. (C.)
Ayer—*Priest, H. B.* (C.)
Boston—Ahern, J. F. (L.)
Bigelow, G. H. (C.)
Craigin, G. A. (L. C.)
English, M. J. (C.)
Hollings, C. B. (M.)
Houston, D. W., Jr. (L.)
Lyman, H. (M.)
Piper, F. (M.)
Reese, J. A. (M.)
Solomon, H. C. (L.)
Sussler, D. (L.)
Tucker, C. C. (C.)
Williams, F. P. (L. C.)
Brockton—Butler, D. M. (L.)
Dacey, C. J. (C.)
Cambridge—Hapgood, L. S. (C.)
Canton—Luce, D. S. (C.)
Holyoke—Ryan, W. P. (M.)
Longmeadow—Martin, H. C. (M.)
Malden—Gallagher, N. A. (C.)
Newton—Schofield, O. L. (C.)
Revere—Rosen, E. (L.)
Wilkins, G. A. (L.)
Stoughton—Ewing, E. H. (L.)
Faxon, N. W. (M.)
Taunton—McGraw, A. J. (M.)
Waltham—Behrman, R. A. (C.)
Williamstown—Howard, F. H. (M.)

MICHIGAN

Battle Creek—Putnam, W. N. (C.)
Big Rapids—Dodge, W. T. (M.)
Calumet—McKinnon, *J. D.* (C.)
Clare—Sanford, B. J. (C.)
Clinton—Thomson, C. S. (L.)
Detroit—*Camelon,* T. P. (M.)
Carpenter, G. B. (L.)
Fay, G. E. (M.)
Gregory, H. L. (C.)
Hawkins, J. L. (L.)
MacMullen, F. B. (L.)
Martin, R. M. (C.)
Mullen, T. F. (M.)
Seeley, W. F. (M).
Stephenson, F. F. (C.)
Van Beeclaere, L. H. (L.)
Flint—Miner, F. B. (C.)
Grand Haven—Addison, C. J. (L.)
Grand Rapids—Beel, H. J. (L.)
Corbus, B. R. (M.)
Hyland, W. A. (L.)
Wells, S. M., Jr. (C.)
Ishpeming—Braden, A. V. (C.)
Lansing—Pinkham, R. A. (L.)
Lowell—Button, A. C. (C.)
Millington—Garvin, W. C. (C.)
Negaunee—Houle, E. C. (M.)
Pequaming—Marshall, F. F. (C.)
Zeeland—De Pree, J. (C.)

MINNESOTA

Breckenridge—Rimer, E. W. (C.)
Brooten—Glyer, R. T. (M.)
Climax—Arneson, T. (C.)
Cloquet—Raiter, F. W. S. (C.)
Minneapolis—Bell, J. W. (C.)
Brown, P. F. (M.)
Cabot, V. S. (L.)
Nelson, O. E. (L.)
Reed, C. A. (M.)
Red Lake—Favour, R., Jr. (C.)
Red Wing—Smith, M. W. (C.)
Redwood Falls—Flinn, T. E. (M.)
Rochester—*Lepper,* L. E. (L.)
Spring Valley—Sather, E. R. (C.)
St. Cloud—Rice, G. D. (M.)
St. Paul—Barron, M. (M.)
Freeman, C. D. (C.)
Nelson, L. A. (C.)

MISSISSIPPI

Aberdeen—Crosby, L. A. (C.)
Algoma—Abernethy, E. G. (L.)
Dundee—Johnson, H. G. (L.)
Jackson—Wall, J. P. (M.)
Meridian—Denson, E. G. (C.)
Pass Christian — Strong, R. A. (M.)
Shannon—Spencer, S. C. (M.)
Sylou—Yates, R. B. (C.)
Winona—Holmes, T. W. (C.)

MISSOURI

Grunfield—Rashauser, J. L. (L.)
Kansas City—Denslow, F. M. (C.)
Goldman, M. (L.)
Hopkins, C. B. (C.)
Milne, L. S. (L. C.)
Snider, S. H. (L.)
Lemons—Cobb, B. E. (C.)
Moberly—Ragan, S. T. (C.)
Mountain Grove—Wittwer, E. C. (C.)
North Kansas City—Dagg, G. R. (C.)
Rocheport—Mabry, P. S. (L.)
Springfield—Lowe, H. A. (C.)
St. Louis—Bosserman, D. C. (L.)
Cochran, J. H. (C.)
Cooley, E. L. (C.)
Dearing, B. F. (L.)
Fischel, W. *(L. C.)*
McFadden, J. F. (C.)
Missimore, L. E. (L.)
Moore, H. M. (M.)
Pickrell, C. D. (C.)
Rotter, J. C. (L.)
Smith, W. I. (C.)
Tormey, A. R. (L.)
Turek, A. E. (L.)
Veeder, B. S. (L. C.)
Vinyard, R. (L.)
Welch, H. W. (L.)

MONTANA

Billings—Richards, W. G. (C.)
Brady—Maguire, L. M. (C.)
Butte—Schwartz, H. (L.)
Drummond—Heetdirks, B. J. (L.)
Great Falls—Reynolds, J. B. (C.)
Kalispell—Griffis, L. G. (C.)
Lewiston—Hedges, R. S. (C.)
Medicine Lake—Morrow, T. M. (L.)
Sidney—Parsons, H. H. (C.)
Winifred—Sears, J. L. (L.)

NEBRASKA

Hastings—Foote, E. C. (M.)
Indianola—DeMay, G. A. (C.)
Kimball—Myler, W. K. (L.)
Lincoln—Garfield, W. T. (C.)
Snipes, J. J. (C.)
Long Pine—Tucker, J. C. (M.)
Mullen—Atkinson, T. E. (L.)
Omaha—Adcock, L. C. (C.)
Jenkins, H. J. (C.)
Linquist, A. L. (C.)
Weeping Water—Thomas, J. W. (C.)

NEVADA

Tuscarora—Secor, C. E. (L.)

NEW HAMPSHIRE

Milford—Talbot, B. L. (M.)

NEW JERSEY

Atlantic City—Weiner, S. E. (C.)
Berlin—Ewing, L. H. (C.)
Burlington—Rink, W. E. (L.)
Camden—Davis, A. B. (M.)
Florence—Peace, E. B. (C.)
Highland Park—Nafey, H. W. (C.)
Jersey City—Feury, N. F. (M.)
Shera, G. W. (C.)
Stout, J. P. (C.)
Metuchen—Ellis, A. L. (C.)
Mont Clair—Harrison, W. N. (C.)
Morristown—Mills, C. (C.)
Newark—Furst, N. J. (L.)
Gordon, A. J. (C.)
Park Ridge—Garrett, H. S. (L.)
Passaic—Clock, C. V. (L.)
Patterson—Levine, S. C. (L.)
Pleasantville—Harley, H. L. (C.)
Trenton—Bellis, H. D. (M.)
Smith, W. H. (L.)

NEW MEXICO

Albuquerque—Brown, H. R. (L. C.)
Deming—Swope, S. D. (M.)

NEW YORK

Albany—Alderson, S. E. (L.)
Brennock, T. M. (L.)
Dickinson, A. M. (C.)
Graham, C. F. (C.)
Keeling, *J. H.* (C.)
Peck, H. A. (C.)
Williams, L. R. (L. C.)
Brooklyn—Agan, W. B. (C.)
Bernstein, P. F. (L.)
Crasson, L. F. (L.)
Eberle, A. (L.)
Everlof, J. L. (L.)
Field, R. M. (L.)
Flynn, J. H. (C.)
Gilmartin, H. A. (C.)
Kornfeld, G. (L.)
Reque, P. A. (C.)
Trumpp, T. F. (L.)
Vaughan, E. M. (M.)
Buffalo—Francis, L. M. (C.)
Lyon, I. P. (M.)
Strozzi, F. E. (L.)
Cold Spring—Hall, R. M. (L.)
[illegible] J. (L.)
[illegible] (M.)
[illegible] W. A. (L.)
Ellenville—Potter, R. T. (L.)
[illegible] (C.)
[illegible] C.)
[illegible] F. P. (L.)
Hoosick Falls—Cahill, F. J. (C.)
Ithaca—Durand, A. C. (M.)
Kings Park—Benson, H. A. (C.)
Kingston—Loughran, R. L. (M.)
Massena—McAloon, R. F. (C.)
Medina—Bugbee, A. S. (C.)
Newark—Newcomb, C. A. (C.)
New Lebanon—Brooks, N. P. (M.)
New Rochelle—Deklyn, C. C. (M.)
Peck, G. A. (M.)
Titus, H. W. (M.)
New York—Bartlett, F. H. (M.)
Bishop, W. H. (L. C.)
Brancato, F. (L.)
Briggs, R. T. (C.)
Burdick, C. G. (M.)
Familton, R. S. (L.)
Farley, D. L. (C.)
Furlong, R. R. T. (L.)
Gillette, C. (M.)
Hofmann, J. W. (C.)
Horan, J. C. (C.)
Hume, W. F. (L.)
Jones, C. C. (C.)
Keller, F. C. (C.)
Klein, A. W. (C.)
Kutil, H. R. (C.)
Law, F. M. (M.)
Macklin, W. F. (M.)
Mohr, E. C. (L.)
Nammack, C. H. (L.)
Nicolson, W. P., Jr. (C.)
O'Brien, W. H. J. (L.)
Pardee, I. H. (L.)
Perkins, C. E. (C.)
Poll, D. (C.)
Robertson, J. H. (L.)
Siris, I. E. (C.)
Smith, E. M. (C.)
Smith, J., Jr. (C.)
Stimson, P. M. (C.)
Swift, H. F. (Col.)
Nichols—Osborne, L. J. (C.)
Patchogue—Terry, A. H., Jr. (C.)
Plattsburg—Hyde, L. W. (L.)
Richfield Springs—Crain, R. B. (C.)
Rochester—Gage, G. H. (M.)
Hincher, C. L. (M.)
Kaiser, A. D. (C.)
Reed, A. P. (M.)
Sutter, C. C. (C.)

Russell—Teepell, F. A. (C.)
Sag Harbor—McCort, J. H. (C.)
Schenectady—Smith, D. G. (C.)
Syracuse—Babcock, A. D. (L. C.)
Waterloo—Carleton, W. W. (C.)
Yonkers—Macbean, W. B. (C.)
Muth, J. C. (C.)

NORTH CAROLINA

Andrews—Orr, C. V. (L.)
Brevard—Summey, T. J. (C.)
Charlotte—Caldwell, J. H. (L.)
Durham—Reade, E. G. (L.)
Goldsboro—Carter, P. C. (C.)
Henderson—Fenner, E. F. (C.)
Hobgood—Leggett, V. W. (C.)
Macclesfield—Mitchell, G. W. (C.)
Whitakers—Cutchin, J. H. (C.)
Wilmington—Codington, H. A. (C.)
Winston-Salem—Hanes, F. M. (L. C.)

NORTH DAKOTA

Grafton—Countryman, J. E. (M.)
Lisbon—Wands, E. E. (C.)
Sherwood—*Greaves*, J. P. (C.)

OHIO

nelia—Hicks, W. M. (C.)
rchbold—Murbach, C. F. (C.)
Bellefontaine—Carey, W. H. (C.)
Bowling Green—Powell, H. J. (L.)
Rae, J. W. (C.)
Bryan—Long, J. W. (C.)
Carey—Van Buren, R. C. (C.)
Cincinnati—Hardinger, R. W (C.)
Maertz, C. (M.)
McCarthy, M. F. (L.)
Spelman, J. D. (L. C.)
Cleveland—Boutwell, J. H. (C.)
Chalat, J. H. (L.)
Dwyer, W. E. (L.)
Grossman, R. G. (C.)
Hosmer, M. F. (C.)
Jackson, T. S. (C.)
Thomas, C. B. (C.)
Wagner, H. F. (C.)
Columbus—Albanese, N. A. (C.)
McClelland, C. E. (M.)
Means, J. W. (M.)
Smith, E. E. (M.)
Wells, C. H. (L.)
Coshocton—Smailes, J. G. (L.)
Dayton—Giffen, G. G. (C.)
Findlay—Van Horn, A. M. (C.)
Galion—Allen, M. L. (C.)
Henderson—Metcalfe, A. W. (C.)
Mansfield—*Findley*, S. E. (L.)
Massillon—*Zintsmaster*, L. B. (C)
Mount Vernon—Dowds, E. D. (C)
National Military Home—Grover, C. P. (M.)
Newark—DeCrow, R. W. (M.)
Oberlin—McCord, J. B. (C.)
Piedmont—Curtiss, W. W. H. (C.)
Piqua—Haley, M. R. (C.)
Rayland—*Cadwell*, J. R. (C.)
Sidney—Conner, J. F. (C.)
Toledo—King, C. R. (L.)
Rieg, P. W. (C.)
Wilson, D. (L. C.)
Van Wert—Sampsell, J. B. (L.)
Waterville—Babcock, H. L. (C.)
West Salem—Cohen, M. B. (L.)
Youngstown—Bierhamp, F. J. (M.)
Phillips, D. B. (C.)

OKLAHOMA

Anadarko—Williams, R. W. (L.)
Cushing—Morris, I. C. (L.)
Hobart—Bonham, J. M. (C.)
McAlester—Willour, L. S. (M.)
Mounds—Driver, C. M. (L.)
Muskogee—Sanford, J. H. (C.)
Oklahoma City—Young, A. D. (C.)
Shawnee—Loy, *C. F.* (L.)
Stratford—Webster, M. M. (C.)
Tulsa—Cook, W. A. (C.)
Astoria—Waffle, E. B. (L.)
Cottage Grove—Frost, C. E. (C.)
Junction City—Howard, M. G. (C.)
Portland—Besson, L. S. (L.)
Grossman, A. A. (C.)
Van Cleve, A. C. (L. C.)
Salem—Ross, D. P ( )

PENNS

Allentown—Jor)
Alenwood—Dav
Altoona—Snyde
Beaver Falls—S)
Bradford—Whit
Bridgeport—Ung (L.)
Butler—Robb, C.
Castle Shannon—B (C.)
ter—Rowland, C.
hocken—Ruth,
Little, T. A. (
atch, P.
F. A.

Edwardsville—Morgan, D. R. (C.)
Erie—Croop, J. E. (C.)
McCarthy, F. P. (L.)
Gettysburg—Bew, R. (M.)
Grove City—Wilson, H. S. (C.)
Hecktown—Beck, S. G. (L.)
Jeannette—Sankey, L. M. (C.)
Johnstown—Hays, C. E. (C.)
Miltenberger, A. (C.)
Lancaster—*Herr*, W. H. (M.)
Latrobe—Blackburn, A. B. (C.)
Morison, G. P. (L.)
Lewisburg—Barton, A. E. (C.)
Middletown—*Evans*, W. P. (C.)
Millheim—Hardenbergh, J. A. (L.)
Mount Union—*Morrow*, J. R. (L.)
Narbeth—Faries, C. T. (C.)
Philadelphia—Borzell, F. F. (C.)
Cohen, L. S. (C.)
Collins, E. W. (C.)
Dambrauckas, A. P. (C.)
Donnelly, D. J. (L. C.)
Elinson, E. L. (L. C.)
Goldberg, M. (L.)
Hebert, A. W. (C.)
Hinton, D. (C.)
Hume, J. E. (M.)
Hutchinson, J. P. (Col.)
Jones, H. W. (L.)
Kramer, D. W. (C.)
MacFarlan, D. (C.)
Meyer, J. E. (L.)
Miller, T. G. (C.)
Moore, E. A. (L.)
Paul, J. D. (C.)
Richards, J. F. (L.)
Stoner, W. H. (C.)
Sweet, J. E. (L. C.)
Whelan, W. F. (C.)
Pittsburgh—Adams, S. H. (C.)
Anderson, W. (C.)
Blumer, M. A. (L.)
Duggan, J. P. (L.)
Guy, W. H. (C.)
Jenny, T. G. (L.)
Markel, J. C. (C.)
Martin, J. L. (M.)
Murphy, H. L. (C.)
Nicholson, H. S. (C.)
Rote, F. C. (C.)
Schleiter, H. G. (L. C.)
Shaffer, H. L. (L.)
Stover, M. E. (M.)
Portage—Buzzard, J. F. (L.)
Pottsville—Wadlinger, C. V. (C.)
Reading—Morgan, D. W. (C)
A. E. (C.)
(C.)
S. (L.)
Shamokin—Jones, A. S. (C.)
Somerset—Dull, J. E. (C.)
South Connellsville—*Dick*, *P. G.* (L.)
Trafford—Pogue, F. M. (C.)
Tremont—Doyle, T. L. (C.)
Simonis, A. E. (C.)
Uniontown—Mulligan, P. B. (I)
West Chester—Pleasants, H., Jr. (M.)
Wilkinsburg — Patterson, B. H. (M.)
Sample, C. W. (M.)
Yukon—Emerson, H. B. (C.)

RHODE ISLAND

Providence—Baker, N. C. (C.)
Buxton, B. H. (C.)
Riverpoint—Christie, C. S. (L. C.)

SOUTH CAROLINA

Charleston—Desussure, H. W. (C)
Chester—Gage, L. G. (L.)
Graniteville—Pearce, J. C. (C)
Greenwood—Harrison, J. D. (M.)

SOUTH DAKOTA

Aberdeen—Vetter, J. H. (L.)
Dell Rapids—Butler, C. A. (L.)
DeSmet—Dyar, B. A. (L. C.)
Groton—Dunn, J. E .(C.)
Redfield—Baldwin, F. M. (C.)
Rosebud—Elliott, L. L. (L.)
Wessington Springs—Keene, F. F. (M.)

SSEE

Brownsvill T. C. (L.)
Cumberlan J. H. A. (C.)
Dukedom— (L.)
Gates—Wil)
Henderson—
Humboldt—
Huntington—
Knoxville—H
Lynnville—D
Mascot—Cope
phis—Bec
Boccellato,
Carter, J.
E. (
J.
L.
ibb

Nashville—Dunklin, F. B. (C.)
Fuqua, E. M. (C.)
Hinton, S. B. (C.)
McKinney, T. D. (C.)
Menees, T. W. (L.)
Miller, E. E. (C.)
White, H. D. (C.)
Oneida—Boyatt, F. M. (L.)
Ridgely—Alexander W. S. (C.)
Washington College—Greenway, S. B. (C.)
Watauga—Wallace, J. W. (C.)

TEXAS

Austin—Woolsey, S. A. (L.)
Beeville—Lander, J. H. (M.)
Biggins—Alldredge, H. H. (C.)
Corpus Christi—Arnold, E. O. (L.)
El *Paso*—*Mason*, C. *H.* (C.)
West, O. C. (C.)
Fort Worth—Higgins, P. F. (C.)
Sanders, F. G. (L.)
Houston—Young, C. B., Jr. (L.)
Laredo—Halsell, J. T. (L. C.)
Lyra—Standlee, T. H. (L.)
McGregor—Johnson, A. (L.)
Mobeetie—Nicholson, *H.* E. (C.)
Nocona—Davis, W. W. (L.)
Post—Surmann, A. C. (L.)
Spur—Moore, W. R. (L.)
Temple—Power, C. L. (C.)

UTAH

Salt Lake City—*Davis*, G. V. *P.* (L.)
Roberts, *G.* F. (C.)
Vernal—Cruikshank, G. H. (C.)

VERMONT

Chester—Roberts, G. (C.)
Montpelier—Chandler, C. P. (C.)
Williston—Frost, H. L. (C.)

VIRGINIA

Bellflower—Stein, C. (C.)
Dante—Taylor, R. E. S. (L.)
Fredericksburg—Pratt, F. C. (C.)
Glen Allen—Hopkins, E. G. (M.)
Hampton—Parramore, J. O. (C.)
Schillinger, E. N. (L.)
Harmony Village—Bennett, J. A. (C.)
Norfolk—Drewry, H. R. (C.)
Petersburg—Booth, J. R. (M.)
Pulaski—Tipton, J. W. (C.)
Richmond—Barney, Q. H. (C.)
Barron, A. A. (C.)
Baughman, G. (C.)
Goldman, I. H. (L.)
Herring, A. L. (M.)
Hopkins, W. B. (C.)
Nelson, J. G. (L. C.)
Williams, C. (C.)
Willis, R. G. (C.)

WASHINGTON

Colfax—Bryant, F. A. (C.)
Kent—Taylor, O. F. (C.)
Seattle—Corson, W. H. (M.)
Hall, D. C. (L. C.)
Spokane—Hilscher, F. W. (C.)
Lambert, S. E. (L. C.)
Nather, F. B. (M.)
Wapato—Duncan, C. R. (L.)

WEST VIRGINIA

Crystal—Rogers, R. O. (C.)
Dorothy—Pettry, B. L. (C.)
Welch—Jones, M. E. (M.)
Wheeling—McLain, W. H. (M.)

WISCONSIN

Appleton—Frawley, W. J. (C.)
Arcadia—Davis, I. G. (L.)
Beloit—Shinnick, T. F. (M.)
Haywad—Pake, S. G. (C.)
Laona—Elliott, R. S. (M.)
Menomonie—Egdahl, A. (C.)
Milwaukee—Beffel, J. M. (M.)
Durner, U. J. (L.)
Foerster, H. R. (C.)
Leahy, J. D. (C.)
Murphy, W. J. (L.)
Rogers, P. F. (C.)
Wallschlaeger, G. G. (L.)
Racine—Hanson, W. C. (M.)
Wauwatosa—Bellis, G. L. (M.)

MEDICAL OFFICERS, U. S. NAVY, RELIEVED FROM ACTIVE DUTY

CALIFORNIA

Los Angeles—Macleish, A.
Morris, M. J.

CONNECTICUT

South Norwalk—West, H. B.

DISTRICT OF COLUMBIA

Washington—Darby, J. J.
Hammond, T. V., Jr.
Ready, F. J.

GEORGIA

Atlanta—McRae, J. C.

ILLINOIS

Chicago—*Howe*, *H.* W.
Kahn, M. E.
Kanter, A. E.

MASSACHUSETTS

Chelsea—Simons, S.
Gloucester—Shinn, P. A.

MINNESOTA

Minneapolis—Swendsen, C. G.

MISSOURI

Kansas City—Denman, J. I.
St. Louis—Gradwohl, R. B. H.

NEBRASKA

Schuyler—Folken, F G.

NEW JERSEY

Gloucester—Geissler, E. E.

NEW YORK

Brooklyn—Hodes, J. E.
New York—Brennan, R. E.
Giles, W. B.
Lowsley, O. S.
Neubauer, F. D.
Sicard, M.
Smith, F. M.
Yonkers—Gaul, W. H.

OREGON

Portland—Bloom, C. F.
Hitchcock, E. D.
Wolf, L. J.

PENNSYLVANIA

Harrisbnrg—*Frasier*, L. W.
Pittsburgh—Callomon, V. B.
Scranton—Burke, A. E.

TEXAS

Dallas—Collier, G.
Marfa—Darracott, J. C.

VIRGINIA

Portsmouth—Dix, S.
Richmond—Fowlkes C. H.

WEST VIRGINIA

Wheeling—Mendel J. H.

ORDERS TO OFFICERS OF THE MEDICAL CORPS, U. S. ARMY

Alabama

To Atlanta, Ga., from Fort McPherson, Major W. C. DABNEY, Birmingham.

To Camp Pike, Ark., from Camp Dix, Capt. F. BEARDEN, Mor-ilton.

Arkansas

overnors Island, N. Y., from Hot Springs, Col. C. M. GANDY.

Louis, Mo., from Camp Upton, Capt. A. A. BLAIR, Scranton.

California

Dix, N. J., as cardiovascular and tuberculosis examiner, Upton, Lieut. W. C. JOHNSON, Fellows.

earney, Calif., from Camp Dix, Lieut. W. W. DODGE,

Colorado

To Denver, Colo., from Fort D. A. Russell, Major A. J. CAMPBELL, Denver.

The following order has been revoked: *To Fort Sam Houston, Tex.*, Lieut. J. E. JEFFERY, Ordway.

Connecticut

To Camp Dix, N. J., base hospital, from Fort Oglethorpe, Lieut. H. E. STEWART, New Haven.

The following order has been revoked: *To Hoboken, N. J.*, from Camp Dix, Lieut. H. M. HURWITZ, Hartford.

Delaware

To Eastview, N. Y., from Camp Upton, Lieut. J. G. SPACKMAN, Wilmington.

District of Columbia

To Walter Reed General Hospital, D. C., from Camp Dix, Capt. W. H. HUNTINGTON, Washington; from Lakewood, Lieut. F. D. ADAMS, Washington.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Lieut.-Col. W. H. LITTLEPAGE, Washington.

Florida

To Charleston, S. C., from Camp Lee, Capt. C. V. GAUTIER, Passagrille.

To Fort Sam Houston, Tex., base hospital, from Camp Dix, Major L. A. GREENE, Greenville.

Georgia

To Fort McPherson, Ga., from Camp Custer, Lieut. J. D. BLACKBURN, Atlanta.

The following order has been revoked: *To Camp Sherman, Ohio*, from Camp Gordon, Capt. W. E. QUILLIAN, Atlanta.

Idaho

To Fort D. A. Russell, Wyo., from Camp Grant, Lieut. W. L. LINDSAY, Nounan.

Illinois

To Camp Knox, Ky., from Camp Bowie, Capt. P. G. CAPPS, Herrin.

To Camp Sherman, Ohio, base hospital, from Camp Grant, Capt. C. A. STONE, Shipman.

To Detroit, Mich., from Camp Upton, Lieut. G. L. VENABLE, Chicago.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Major E. A. GRAHAM, Chicago.

Indiana

To Fort Benjamin Harrison, Ind., from Camp Dix, Capt. F. H. KELLY, Argos.

The following order has been revoked: *To Washington, D. C.*, Surgeon-General's Office, from Camp Dix, Lieut.-Col. H. O. BRUGGEMAN, Fort Wayne.

Iowa

To Fort Sheridan, Ill., from Lakewood, Lieut. J. O. MURPHY, Eldon.

To Fox Hills, N. Y., from Camp Dix, Capt. S. M. LANGWORTHY, Cedar Rapids.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Col. D. S. FAIRCHILD, Clinton.

Kansas

To Fort Riley, base hospitali from Camp Dix, Major N. A. SEEHORN, Hutchinson.

To Lee Hall, Va., from Hampton, Lieut. L. I. EVANS, Delavan.

Kentucky

To Camp Sherman, Ohio, base hospital, from Camp Dix, Capt. C. W. STROUP, Ludlow.

To Camp Zachary Taylor, Ky., from Camp Dix, Capt. A. G. OSBORNE, Myra.

Maryland

To Hampton, Va., from San Francisco, Lieut. H. E. AUSTIN, Baltimore.

To Oteen, N. C., from Walter Reed General Hospital, Lieut. P. PEARLSTEIN, Baltimore.

To Roland Park, Md., from Baltimore, Capt. L. H. WEED, Baltimore.

Massachusetts

To Boston, Mass., from Camp Devens, Capt. H. J. FITZSIMMONS, Boston; from Lakewood, Lieut. A. G. C. SCHNACK, Boston.

To Camp Sherman, Ohio, base hospital, from Lakewood, Lieut. W. F. COTTING, Boston.

To Camp Upton, N. Y., base hospital, from Camp Dix, Lieut. L. S. KEMP, Canton.

To Walter Reed General Hospital, D. C., from Army Medical School, Lieut. J. H. MURPHY, Boston.

The following order has been revoked: *To Colonia, N. J.*, from Camp Dix, Lieut. E. Y. KAU, Boston.

Michigan

To Detroit, Mich., from Camp Dix, Capt. A. R. PEARCE, Dollar Bay; from Fort Riley, Capt. C. H. BELKNAP, Detroit.

To Fort Leavenworth, Kans., from Camp Dix, Capt. B. H. JENNE, Detroit.

Minnesota

To Camp Dix, N. J., from Fort Riley, Lieut. F. T. CAVANOR, Minneapolis.

To Fort Ontario, N. Y., from Lakewood, Lieut. H. N. KLEIN, St. Paul.

To Fort Sheridan, Ill., from Fort McPherson, Lieut. S. V. HODGE, Minneapolis.

Missouri

To Fort Des Moines, Iowa, from Camp Jackson, Lieut. C. F. DAVIS, Kansas City.

To Fort Riley, from Camp Travis, Capt. D. E. SCHMALHORST, St. Louis.

To Fort Sam Houston, Texas, from Corpus Christi, Lieut. W. J. MELLIES, St. Louis.

To Fox Hills, N. Y., from Lakewood, Lieut. C. M. SAMPSON, St. Joseph.

Nebraska

To Camp Bowie, Texas, from Fort Riley, Lieut. C. W. WAY, Wahoo.

To Camp Dix, N. J., from Fort Riley, Capt. J. J. HOMPES, Lincoln.

New Hampshire

To Camp Abraham Eustis, Va., from Camp Dix, Capt. S. A. QUIMBY, Littleton.

To Camp Zachary Taylor, Ky., base hospital, from Lakewood, Lieut. A. F. SARGENT, Pittsfield.

New Jersey

To Colonia, N. J., from Walter Reed General Hospital, Lieut. J. G. DENELSBECK, Trenton.

To Walter Reed General Hospital, D. C., from Camp Dix, Lieut.-Col. H. A. PHILLIPS.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Lieut. R. M. WILDER.

New York

To Fort Ontario, N. Y., from Camp Dix, Capt. J. J. CUNNINGHAM, New York; from Lakewood, Lieuts. W. PHIPARD, A. TOWBIN, New York.

To Fort Sheridan, Ill., from Camp Sherman, Major R. N. SEVERANCE, Staten Island.

To Fox Hills, N. Y., from Camp Dix, Major R. H. FOWLER, Lieuts. H. A. TRAYNOR, Brooklyn; W. B. RYAN, Jr., New York; from Colonia, Capt. J. C. FISK, New York.

To Hoboken, N. J., Capt. F. W. MOORE, Lieuts. M. N. FOOTE, W. K. PUDNEY, Brooklyn; Capt. N. A. SULLO, Utica.

North Carolina

To Camp Dix, N. J., from Fort Riley, Lieut. R. T. UHLS, Franklinton.

To Hoboken, N. J., Lieut. R. J. LOVILL, Wingate.

Ohio

To Otisville, N. Y., from Columbus Barracks, Lieut.-Col. H. G. HUMPHREYS.

The following order has been revoked: *To Fort Sheridan, Ill.*, from Camp Dix, Major A. MacIVER, Marysville.

Oklahoma

To Fox Hills, N. Y., from Camp Dix, Lieut. C. N. BERRY, Norman.

To Hoboken, N. J., Capts. D. L. GARRETT, Altus; W. McILWAIN, Lone Wolf.

Oregon

To Walter Reed General Hospital, D. C., from Hoboken, Major R. B. DILLEHUNT, Portland.

Pennsylvania

To Army Medical School, from Camp Custer, Capt. S. C. BOWERS, New Freedom. For instruction, from Camp Dix, Capt. W. F. BEITSCH, New Brighton.

To Boston, Mass., from Lakewood, Lieut. T. M. MABON, Pittsburgh.

To Eastview, N. Y., from Lakewood, Lieut. H. W. JONES, Philadelphia.

To Fort McHenry, Md., from Camp Lee, Lieut. V. T. SHIPLEY, Philadelphia.

To Philadelphia, Pa., from Camp Meade, Capt. W. F. MORRISON, Philadelphia.

The following orders have been revoked: *To Fort McHenry, Md.*, from Camp Dix, Capt. N. R. GOLDSMITH, Philadelphia. *To Pittsburgh, Pa.*, from Camp Dix, Lieut. J. H. SEIPEL, Pittsburgh.

Rhode Island

To Detroit, Mich., from Fort Sheridan, Major J. F. HAWKINS, Providence.

South Carolina

To Fort D. A. Russell, Wyo., from Lakewood, Capt. T. C. GALLOWAY, Columbia.

To Walter Reed General Hospital, D. C., from Spartanburg, Lieut. W. E. FULMER, Columbia.

Tennessee

To Akron, Ohio, from Hampton, Va., Lieut. E. E. BYRD, National Soldiers Home.

To Camp Pike, Ark., from Camp Dix, Lieut. C. W. BROWN, Memphis.

Texas

To report to the commanding general, Southern Department, from Camp Jackson, Capt. A. L. LINCECUM, Austin; from Camp Travis, Lieut. O. J. GEE, Timpson.

To Washington, D. C., from Spartanburg, Lieut W. C. COLBERT, Chicota.

Utah

To Camp Dix, N. J., from Fort Riley, Capt. G. E. McBRIDE, Magna.

Virginia

To Walter Reed General Hospital, D. C., from Camp Lee, Lieut.-Col. J. M. CABELL, Fort Myer; from Newport News, Capt. B. S. BURNET.

The following order has been revoked: *To Richmond, Va.*, from Camp Dix, Lieut. R. C. HOOKER, Richmond.

Washington

To Camp Lewis, Wash., from Camp Jessup, Major F. J. CULLEN, Napavine.

To report to the commanding general, Philippine Department, from Camp Lee, Lieut. C. R. GLENN, Kelso.

West Virginia

To Camp Jackson, S. C., base hospital, from Camp Gordon, Lieut. C. M. TRUSCHEL, Wheeling.

To Hoboken, N. J., Lieut. G. P. McCOY, Franklin.

Wisconsin

To Camp Dix, N. J., from Fort Riley, Lieut. H. A. VINCENT, Beloit.

To Fort Sheridan, Ill., from Camp Dodge, Capt. G. R. RANDALL, Milwaukee; from Camp Upton, Major L. A. MOORE, Monroe.

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest: such as relate to society activities, new hospitals, education, public health, etc.)

ARKANSAS

New State Officers.—The forty-third annual meeting of the Arkansas Medical Society was held in Little Rock, May 20 to 22, under the presidency of Dr. Edward F. Ellis, Fayetteville, and the following officers were elected: president, Dr. George S. Brown, Conway; vice presidents, Drs. Charles E. Kitchens, Dequeen; Aaron L. Carmichael, Little Rock, and R. E. Cooksey, Magnolia; secretary, Dr. Clinton P. Meriwether, Little Rock (reelected); treasurer, Dr. William R. Bathurst, Little Rock (reelected).

CALIFORNIA

May Return Annual Fee.—The governor has just approved a bill passed by the legislature authorizing the State Board of Medical Examiners to return annual fees to physicians collected during the time they were in the national service.

Legislature Reverses Itself.—A peculiar situation has arisen in regard to granting osteopaths the right to use the hypodermic syringe in administering local anesthetics. Both houses of the legislature passed House Bill No. 928, granting this right, and also Senate Bill No. 604, forbidding such practice by osteopaths. The two bills had been introduced as companion measures. The decision now rests with the governor as to which shall become a law.

CONNECTICUT

Annual Meeting of State Society.—At the annual meeting of the Connecticut State Medical Society held in Bridgeport, May 21 and 22, the following officers were elected: president, Dr. Charles B. Graves, New London; vice presidents, Drs. George H. Noxon, Darien, and Frank H. Wheeler, New Haven; secretary, Dr. John E. Lane, New Haven (reelected); treasurer, Dr. Phineas H. Ingalls, Hartford; editor of the proceedings, Dr. James F. Rogers, New Haven (reelected). The next meeting will be held at New Haven, May 19 and 20, 1920.

Medical Library Enlarged.—Yale University School of Medicine has enlarged its medical library, providing more space for books and for the reading room. There are now 26,000 volumes in the library, including 14,000 bound volumes of medical journals and society transactions. There are over 250 medical periodicals, including both American and European journals. The library contains the "Index Medicus," the "Surgeon-General's Catalogue," and the "Quarterly Cumulative Index." A part of the library was donated to the medical school by the New Haven Medical Society.

DISTRICT OF COLUMBIA

Emergency Hospital.—Dr. William P. Carr has relinquished the post of chief attending surgeon, having been made consulting surgeon. Dr. James F. Mitchell has been appointed chief attending surgeon.

New Treasurer for Medical Society.—Dr. Charles W. Franzoni, for over forty-six years treasurer of the Medical Society of the District of Columbia, has resigned on account of the infirmities of age. The society accepted the resignation but made Dr. Franzoni treasurer emeritus and continued the honorarium he had formerly received. Dr. Edward G. Seibert was elected treasurer.

GEORGIA

Practice Act Amended.—The Georgia legislature has passed amendments to the medical practice act increasing the requirement of preliminary education in the state to two years of college work in and after the session of 1919-1920; providing for the recognition of certificates granted by the National Board of Medical Examiners and providing for the revocation of the license of any physician convicted of violating the Harrison Narcotic Law.

Personal.—Dr. Charles D. Cleghorn, superintendent of the Macon Hospital, has resigned and has been succeeded by Mr. L. C. Brown.——Dr. Charles L. Williams, who has been in charge of the health department of Macon since the location of Camp Wheeler, has moved to Charleston, S. C., and before leaving was presented with a gold watch and chain by the mayor and council of Macon.——Dr. Mather M. McCord, Rome, health officer of Floyd County, has resigned, to take effect July 1.

ILLINOIS

Special Health Edition of Urbana Daily Courier.—This paper, published in Urbana, Ill., the seat of the state university, issued a special health edition, Monday, May 12, the first day of the "clean-up" week. A six-page supplement is devoted entirely to this campaign, and the articles contained are written by such persons as the chairman of the sanitation committee, president of the Association of Commerce of Urbana, the mayor of the city, county superintendent of schools, members of the University faculties, and many others.

New State Officers.—At the sixty-sixth annual meeting of the Illinois State Medical Society held in Peoria, May 22, under the presidency of Dr. Edward W. Fiegenbaum, Edwardsville, the following officers were elected: President, Dr. J. Warren Van Derslice, Oak Park; president-elect, Dr. W .F. Brinsted, Cairo; vice presidents, Drs. George H. Weber, Peoria, and Clara P. Seippel, Chicago; secretary, Dr. Wilbur H. Gilmore, Mount Vernon (reelected); treasurer, Dr. A. J. Markley, Belvidere (reelected). The next meeting will be held in Rockford.

New Officers.—At the annual meeting of the Knox County Medical Society, held in Galesburg, May 8, Dr. Charles B. Horrell, Galesburg, was elected president; Dr. Clark E. Weir, Abingdon, vice president, and Dr. George S. Bower, Galesburg, secretary (reelected). Of the forty-four members of the society, seventeen were in the military service and eighteen were members of draft boards.——At the annual meeting of the Elgin Physicians' Club, May 5, Dr. Ralph T. Hinton, Elgin, was elected president; Dr. George F. Ruppert, Elgin, vice president, and Dr. Sallie Y. Howell, Elgin, was reelected secretary-treasurer.

Chicago

Personal.—Harry D. Orr, Col., and Daniel W. Rogers, Lieut.-Col., M. C., U. S. Army, have returned from Europe with the Thirty-Third Division.

Sachs Memorial Tablet.—A memorial tablet will be dedicated at the grave of Dr. Theodore B. Sachs, at the Edwards Sanatorium, Naperville, June 1, at 4 p. m. Addresses will be delivered by Drs. Robert H. Babcock, Ethan Allen Gray, and Mrs. M. L. Aren.

LOUISIANA

Six Clinics for Women.—Six new clinics of the Lying-In Hospital Dispensary, New Orleans, for women expecting confinement, are to be opened in various parts of the city, by Dr. Jacob W. Newman, New Orleans, director of the institution.

Personal.—Dr. Joseph A. Danna, New Orleans, who commanded the Loyola Hospital Unit in Italy and recently returned to the United States, has been elected a member of the Board of Directors of the City Bank and Trust Company, New Orleans.——Dr. Fred W. Gaulden, New Orleans, was elected president of the Supreme Council of the Catholic Knights of America at its meeting in St. Louis, May 16.

New Officers.—At the annual meeting of the Louisiana State Medical Society held at Shreveport, April 8 to 10, under the presidency of Dr. Wilkes H. Knolle, New Orleans, the following officers were elected: President, Dr. Eugene L. Henry, Lecompte; vice presidents, Drs. Courtland P. Gray, Monroe; Sidney C. Barrow, Shreveport; Theodore J. Dimitry, New Orleans; secretary-treasurer, Dr. Everard W. Mahler, New Orleans.

MARYLAND

New Officers.—The twenty-second anniversary of the Baltimore County Medical Association was celebrated May 21, at the Hotel Rennert, Baltimore. The officers of the organization are: president, Dr. Frank W. Keating, Owings Mills; vice president, Dr. John W. Harrison, Middleriver; secretary-treasurer, Dr. Alfred T. Gundry, Catonsville.

Health Ordinance for Hagerstown Fails.—A health ordinance, drafted by a committee appointed by seven charitable and social bodies to provide for a city health officer for Hagerstown, failed, as it was held that the appointment of such an officer, created by the proposed ordinance, was vested in a committee of persons who were not municipal officers. The city attorney has been instructed to draft a health ordinance that will be practical. The committee appointed by the charitable and health organizations was also asked to prepare a new ordinance.

Personal.—Col. A. Depage, the Belgian surgeon, was a guest during this week of the Baltimore committee of the American Medical Association, composed of Drs. John M. T. Finney, Lewellys F. Barker, Archibald C. Harrison, Hugh H. Young and Thomas S. Cullen. Colonel Depage lectured at the Johns Hopkins Hospital on "Hospital Work at the Front," illustrated with lantern slides, on May 21.——Asst. Surg.-Gen. Henry R. Carter, U. S. P. H. S., who has been seriously ill with influenza and pneumonia while on a southern detail, has recovered sufficiently to return to his station, at the U. S. Marine Hospital, Baltimore.

MASSACHUSETTS

Personal.—Dr. Walter D. Berry, assistant superintendent of the Gardner State Colony for the Insane has been appointed resident physician and surgeon of the Connecticut Reformatory, Cheshire.

Asks Increased Pay for Coroners.—Dr. George B. Magrath, Boston, medical examiner (coroner) for Suffolk County, has asked the committee on counties to report favorably on the bill calling for increased salaries of medical examiners (coroners) in Suffolk, from $4,000 to $5,000.

New Officers.—At the annual meeting of the Norfolk District Medical Society held in Boston, May 13, Dr. Francis P. Denny, Brookline, was elected president; Dr. George W. Winchester, vice president; Dr. Bradford Kent, secretary, and Dr. George W. Kaan, treasurer, all of Boston.

MICHIGAN

Personal.—Dr. Fred R. Belknap, Benton Harbor, underwent operation, May 7, at Mercy Hospital, Benton Harbor. ——Dr. William De Kleine has been reelected health officer of Flint.

Physicians Freed by Jury.—In the cases of Drs. Ezra L. Covey, Homer, and Lewis M. Carey, Pontiac, charged with having performed an illegal operation on a Pontiac woman, thereby causing the death of her infant, the circuit court jury returned a verdict of acquittal, May 14.

Hospital Shortage.—The Detroit *Free Press*, in an editorial, May 19, on the inadequacy of the hospital facilities of Detroit, citing the report of Dr. Warren L. Babcock, Detroit, chairman of the hospitals committee of the Community Union, that the city is about 50 per cent., or 2,700 beds, short of its needs.

Municipal Medical School in Detroit.—The Detroit College of Medicine and Surgery is now a municipal institution, having been placed under city control in June, 1918. A bill has just been passed by the Michigan legislature ratifying this action and authorizing the board of education of Detroit to conduct the medical school as a part of its educational system.

State Board Appointments.—Dr. Richard M. Olin, Lansing, secretary of the state health board has been appointed state health commissioner under the new Moore bill.——Drs. James G. Turner, Houghton, and Guy L. Kiefer, Detroit, have been appointed members of the advisory health council for the six year term, and Dr. Clyde C. Slemons, Grand Rapids, Frank M. Gowdy, St. Joseph, for the four-year term. The fifth member of the council, who must be an attorney, has not been appointed.

MINNESOTA

Cleared of Charges.—At the meeting of the board of trustees of the Soldiers' Home, Minneapolis, May 13, Dr. Thomas C. Clark, superintendent of the home, was exonerated of the charges of neglect which has been made against him by wives of certain inmates of the institution.

Personal.—Dr. Henry M. Bracken, secretary of the state board of health, St. Paul, resigned, May 12, and has been appointed supervisor of District No. 10, of the United States Public Health Service, which comprises Minnesota, North Dakota, South Dakota and Montana. He will hold commission as surgeon of the Reserve Corps, U. S. P. H. S. His headquarters will be in St. Paul, and his duties will be the organization and administration of agencies for the care of war risk patients.—Dr. William B. Wright, Jr., St. Paul, has been appointed superintendent of the Rood Hospital, Hibbing. ——Dr. Mabelle S. Ulrich, Minneapolis, has been appointed a member of the board of public welfare.——At the meeting for organization of the Cottonwood County Health Association at Windom, April 30, Dr. Ludwig L. Sogge was elected president.

NEW HAMPSHIRE

New State Officers.—At the annual meeting of the New Hampshire Medical Society, May 15, the following officers were elected: president, Dr. Augustus W. Shea, Nashua; vice president, Dr. Alpha H. Harriman, Laconia.

President of State Board Dies.—Dr. Albert S. Wetherell, Exeter, president of the state board of pharmacy, aged 68; for many years chairman of the public and state executive committees, a member of the house of representatives in 1893 and 1895 and of the senate in 1901, died at the Cottage Hospital, Exeter, April 1.

NEBRASKA

State Officers for 1920.—At the fifty-first annual meeting of the Nebraska State Medical Association, held in Lincoln, May 20 to 22, under the presidency of Dr. John M. Banister, Omaha, the following officers were elected: president, Dr. H. Winnett Orr, Lincoln; vice presidents, Drs. George H. Brash, Beatrice, and Adolph Sachs, Omaha.

Personal.—Dr. Ernest T. Manning, commissioner of health of Omaha, has resigned.——Dr. Elizabeth P. M. Hohl, McCook, has been elected grand medical examiner for Nebraska of the Order of Degree of Honor.——Dr. Clifford A. Lutgen, Auburn, who was operated on in Omaha for appendicitis recently, is making rapid progress toward recovery.

NEW YORK

Personal.—The council of New York University has voted unanimously to confer on Dr. William G. Bissell, Buffalo, the honorary degree of Doctor of Public Health, at the coming commencement, June 11.

Lethargic Encephalitis.—In view of the desirability of making pathologic and etiologic studies of fatal cases of lethargic encephalitis, the state department of health requests that when feasible, specimens of the brain and particularly the medulla and pons, and when possible of the spinal cord, be sent promptly to the division of laboratories of the New York state department of health. The specimens should be placed in an abundance of 10 per cent. liquor formaldehyd after small portions of the medulla and pons have been excised and put in a mixture of half glycerin and water. It is also requested that a brief history of the case accompany the specimens.

New Officers.—At the annual meeting of the Medical Society of the State of New York held in Syracuse, May 6 to 9, under the presidency of Dr. Thomas H. Halsted, Syracuse, New York was chosen as the place of meeting for 1920, and the following officers were elected: President, Dr. Grant C. Madill, Ogdensburg; vice presidents, Drs. Dwight H. Murray, Syracuse; William M. Dunning, New York City, and George W. Cottis, Jamestown; secretary, Dr. Floyd M. Crandall, New York (reelected); assistant secretary, Dr. Edward L. Hunt, New York; treasurer, Dr. Harlow Brooks, New York; assistant treasurer, Dr. Thomas C. Chalmers, Queens' County.

New Section Officers.—At the annual meeting of the Medical Society of the State of New York, held in Syracuse, May 5 to 8, the following sectional officers were appointed: section on pediatrics: Dr. Alfred C. Mercer, Syracuse, chairman; Dr. Godfrey R. Pisek, New York City, vice chairman, and Dr. Robert Sloan, Utica, secretary; section on medicine: Dr. Claude C. Lytle, Utica, chairman; Dr. Ledra Heazlit, Auburn, secretary; section on public health: Dr. Paul B. Brooks, Albany, chairman; Arthur D. Jaques, Lynbrook and Rockville Center, secretary; and section on eye, ear, nose and throat: Dr. Arthur J. Bedell, Albany, chairman, and Dr. Irving W. Voorhees, New York City, secretary.

New York City

Treasury Takes Brooklyn Hospital.—The Norwegian Hospital at Fourth Avenue and Forty-Sixth Street, Brooklyn, has been taken over by the Treasury Department. The institution is to be used for caring for men covered by the War Insurance Act whom the Army refuses to discharge from service until cured.

Memorial Hospital for Queens.—The Citizens Committee of the Borough of Queens has announced plans for the erection of hospital buildings in connection with St. Mary's and the Jamaica Hospitals in memory of the soldiers of the Borough of Queens who lost their lives in the war. The estimated cost of the proposed buildings is $500,000 which will be raised by a public drive throughout the borough. These buildings will be equipped with 100 beds each and with laboratories, clinics, ambulances and other hospital facilities.

Auditorium Building for Mount Sinai Hospital.—The Mount Sinai Hospital has received a gift of $150,000 from Mr. and Mrs. George Blumenthal for the erection of an auditorium building on the hospital grounds at Nintey-Ninth Street east of Fifth Avenue. Besides a large auditorium which will be devoted to the educational work of the hospital, the Mount Sinai Training School for Nurses, and the social service department, the new building will house a new roentgen-ray department. The building is to be erected as a memorial to George Blumenthal, Jr. The Blumenthal Auditorium, as the new building is to be known, will be the sixteenth building in the Mount Sinai group.

Faculty Appointments at Columbia.—The following appointments and promotions at the College of Physicians and Surgeons of the City of New York are announced by the trustees of Columbia University: Dr. William E. Studdiford, professor of obstetrics and gynecology, to succeed Dr. Edward B. Cragin, deceased; Dr. Allen O. Whipple, associate in surgery, to be assistant professor of pathology; Dr. Benjamin P. Farrell, instructor in orthopedic surgery, to be assistant professor in the same branch; Dr. Louis Casamajor, associate professor of neurology, to be professor of neurology, and Oliver S. Strong, Ph.D., assistant professor of neurology, to be associate professor of neurology.

OKLAHOMA

New Officers.—At the annual meeting of the Oklahoma State Medical Association held in Muskogee, May 20 to 22 under the presidency of Dr. Lewis J. Moorman, Oklahoma City, the following officers were elected: president-elect, Dr. John W. Duke, Guthrie; vice presidents, Drs. Jackson Brashear, Lawton; General Pinnell, Miami, and John A. Hatchett, El Reno. Oklahoma City was selected as the place of meeting for 1920.

Personal.—Dr. Walter H. McKenzie, Enid, has been appointed superintendent of health and United States Medical Examiner for Garfield County.——Dr. George M. Clifton, Norman, has been appointed superintendent of health for Cleveland County.——Dr. John P. Sudderth, Bartlesville, has been reappointed health officer of Nowata County.——Dr. Eugene O. Barker has been appointed city physician of Guthrie.——Floyd J. Bolend, Lieut.-Col., M. C., U. S. Army, Oklahoma City, commanding officer of the One Hundred and Eleventh Sanitary Train of the Thirty-Sixth Division, has been appointed chief surgeon of the American Forces in Italy.

PENNSYLVANIA

Optometry Bill Favored.—Representative Duncan Sinclair of Fayette County was directed by the committee on health and sanitation to report favorably to the house his bill amending the act of March 30, 1917, so as to require a majority of the state optometry board of seven members to be physicians, licensed under the laws of the state and qualified to practice medicine and surgery and that the other members of the board shall be optometrists.

Personals.—Dr. Joseph T. Rothrock, West Chester, was 80 years of age April 9. The American Forestry Association has announced that eighty memorial trees will be planted in honor of Dr. Rothrock, the "father of forestry" in Pennsylvania.——Dr. Henry A. Hutchison, Dixmont, having completed forty years of continuous service in the Dixmont Hospital for the Insane, thirty-five years as its superintendent, tendered the employees and patients a reception and ball at the institution, April 15.

Harrisburg—Proposed Model City for Health.—Members of the Civic Club, Rotary Club, Chamber of Commerce and other organizations attended a preliminary mass meeting, April 14, in the hall of the house of representatives, Harrisburg, at which was outlined State Health Commissioner Martin's plan to make Harrisburg a model city from the standpoint of public health and sanitation, as an example to the other cities of Pennsylvania, concerning the measures the state health department would have them take. Mayor Keister promised the city's hearty cooperation in the plan, as has Dr. John M. J. Raunick, local health officer.

Philadelphia

Dedicate Negro Hospital.—Buildings of the Protestant Episcopal Divinity School on Woodland Avenue, occupying the entire block between Fiftieth and Fifty-First Street, recently purchased by the Mercy Hospital and School for Nurses, was dedicated, May 25. This is the largest hospital in the United States owned and controlled solely by negroes.

Personal.—Dr. Alexander Sterling, Philadelphia, has been appointed assistant physician pro tem, in the department of medicine of the Jewish Hospital, in the service of Dr. S. Solis Cohen.——Dr. Alexander C. Abbott, professor of hygiene at the University of Pennsylvania and in charge of sanitary supervision for the Second Army, A. E. F., has been promoted to colonel.——Dr. Joshua E. Sweet, Philadelpia, on duty with Base Hospital No. 10, has been promoted from major to lieutenant-colonel.——Provost Edgar Fahs Smith of the University of Pennsylvania celebrated his sixty-third birthday, May 23. A loving cup was presented to him by the students. Provost Smith has been professor for the last thirty years at the university and a provost for eight years.

TENNESSEE

Home for Feebleminded.—The house of representatives has passed on final reading a bill giving the state control of its feebleminded, and providing for the establishment of a home for those who may be declared mentally deficient.

State Board Meeting.—The State Board of Preliminary Medical Examiners will hold its annual meeting in Nashville, June 12, and on the two succeeding days the state board of medical examinations will be held. All who desire to take the state board examinations should appear before the board of preliminary examiners, June 12, and obtain the necessary certificate from this board.

Personal.—Edward C. Ellett, Lieut.-Col., M. C., U. S. Army, Memphis, who was commanding officer of Base Hospital No. 115, returned, May 12.——Dr. A. G. Buckner, formerly adjutant-general of Tennessee, has been elected director of dental hygiene by the state board of health.——Dr. Clarence B. A. Turner, Newbern, has been appointed a member of the state board of health, succeeding Dr. Vincent A. Biggs, Martin.——Dr. John Overton, Nashville, has been appointed prison physician.

TEXAS

Health Bureaus Organize.—The state board of health announces the organization of a bureau of child hygiene, with Dr. Oscar Davis, Anderson, as director, a bureau of communicable diseases with Dr. Horace C. Hall, Laredo, as director, and a bureau of public health education and sanitation and preventive medicine, the director of which will be announced later.

Women's Auxiliary Organized.—At the meeting of the State Medical Association of Texas, at Waco, May 14, the Women's Auxiliary to the State Medical Association of Texas was organized, with Mrs. E. H. Carey, Dallas, president. The object of the organization is to extend the aims of the medical profession through the wives of physicians to the various women's organizations which look toward advancement of health and education, to assist in entertaining in state, district and county medical society meetings, and to promote acquaintance between doctors' families.

Personal.—Dr. Henry E. Luehrs, Mathis, is about to leave for South America, where he will have charge of a large hospital.——Dr. Lane B. Kline, who recently secured his discharge from the Medical Corps, U. S. Army, has been appointed health officer of Houston.——Dr. Thomas A. King, Vernon, has been appointed a member of the state board of medical examiners, succeeding Dr. Dabney Berrey, San Antonio.——Dr. A. J. Cook, Laredo, who recently was discharged from the medical corps of the Army, has been secured as physician and surgeon for the Anaconda Copper Company at Portrellos, Chile.

State Association Meeting.—The fifty-third annual meeting of the State Medical Association of Texas was held in Waco, May 13-15, and the following officers were elected: president, Dr. Robert W. Knox, Houston; president-elect, Dr. Thomas T. Jackson, San Antonio; vice presidents: Drs. Martin E. Taber, Dallas; George H. Lee, Galveston, and William L. Crosthwait, Waco; secretary, Dr. Holman Taylor, Fort Worth (reelected); treasurer, Dr. Wilmer L. Allison, Fort Worth (reelected); trustees: Drs. Charles M. Alexander, Coleman; John S. Turner, Dallas; Charles E. Cantrell; Greenville; John T. Moore, Houston (chairman), and William R. Thompson, Fort Worth (secretary).

WEST VIRGINIA

New State Officers.—At the annual meeting of the West Virginia State Medical Association held in Clarkesburg, May 20 to 22, under the presidency of Dr. Robert J. Reed, Wheeling, the following officers were elected: President, Dr. Henry R. Johnson, Fairmont; vice presidents, Drs. Benjamin F. Shuttleworth, Clarksburg; Walter E. Vest, Huntington; Joseph L. Miller, Thomas; secretary, Dr. J. Howard Anderson, Marytown (reelected); Dr. Hugh G. Nicholsen, Charleston (reelected). Parkerburg was selected as the place of meeting for 1920.

WISCONSIN

Hospital Addition.—The demand for admission to the new Whitehall Community Hospital which was opened last fall has been so great that at the last meeting of the board of directors it was voted to build an addition to accommodate twelve patients. A nurses training school is operated in connection with the institution.

Conference on City Hospital.—The Free Conference of Milwaukee Hospitals, an organization formed for cooperation between medical institutions of the city, held its first meeting, April 20, under the chairmanship of Dr. George C. Ruhland, health commissioner. The council will act only in an advisory capacity, exercising no jurisdiction over the hospitals.

Personal.—Dr. John L. Callahan has been elected president of the board of health of LaCrosse, succeeding Dr. Jacob M. Furstman, who was made head of the department of health of Bloomington, Ill.——Dr. George W. Harrison, Ashland, just returned from overseas, has been elected county physician of Ashland County.——Gustavus I. Hogue, Major, M. C., U. S. Army, Milwaukee, has been promoted to Lieut.-Col., Medical Corps and placed in charge of the Army Eye, Ear, Nose and Throat Hospital in Paris.——Dr. Bertha V. Thomson has been appointed health commissioner of Oshkosh.——Dr. Emil E. Tanner, Milwaukee, has started for Vladivostok, where he will be on duty with the American Red Cross.

CANADA

Personal.—Dr. Archibald P. Knight, for twenty-seven years professor of physiology in Queens University, Kingston, Ont., announces his intention to resign, but will retain his position until his successor has been appointed.

Addition to Endowment Fund.—Queens University, Kingston, Ont., reports that an additional endowment fund of $1,000,000 has been received for the general purposes of the university. With the income of this fund it is proposed to secure several more full-time professors and to develop the departments of physiology and bacteriology and public health. A fund of $200,000 is also available to be expended in the reconstruction of the hospital.

Illegal Practitioner Punished.—In the case of M. H. Thuna, Montreal, who advertised himself as "Dr. Thuna, Specialist. Balsam Medicine for all Diseases," charged by the registrar of the College of Physicians and Surgeons of the province of Quebec with having violated the law regarding the practice of medicine, the accused was found guilty and sentenced to pay a fine of $50, and in default of such payment to be imprisoned for sixty days, in the common prison. The same judgment was rendered on three counts.

LATIN AMERICA

Deaths Abroad.—Dr. H. G. Pinero, professor of physiology in the School of Medicine in the University of Buenos Aires, died recently at Mar del Plata.

The Influenza in Venezuela.—At a recent meeting of the National Academy of Medicine of Caracas, mention was made of the fact that a new wave of influenza seemed imminent, as a number of physicians had already a number of cases of the disease, some of whom had it during the last outbreak.

Pasteur Institute in Nicaragua.—The government of Nicaragua has requested the Mexican government to send a person to establish a Pasteur institute at Managua. The Mexican government has intrusted this task to Dr. G. Leal, who will soon depart for Managua with the necessary personnel and equipment.

GENERAL

Electro-Therapists Meet.—At the annual meeting of the Western Electro-Therapeutical Association, held in Kansas City the second week in May, the following officers were elected: president, Dr. Burton B. Grover, Colorado Springs; vice presidents, Drs. Walter P. Grimes, Kansas City, and Theodore F. Clark, Eldorado, Kan.; secretary, Dr. Charles Wood Fassett, Kansas City, Mo.; treasurer, Dr. Charles Keown, Independence, Mo., and registrar, Dr. Enos A. Nelson, Phillipsburg, Kan.

Venereal Manual Free to Physicians.—The U. S. Public Health Service announces that all physicians agreeing to cooperate with that service and their state board of health in the venereal disease program which has just been agreed on, will be furnished either by the public health service or the state board of health with a copy of the *Manual for the Treatment of Venereal Diseases*, published by the American Medical Association, first issued for the use of the medical officers of the Army and which has now been revised for civilian use with a new chapter on gonorrhea in women.

Pharmacopeial Convention.—Dr. Harvey W. Wiley, Washington, D. C., president of the United States Pharmacopeial Convention, announces the tenth decennial convention, which will meet in Washington, D. C., on the second Tuesday of May, 1920, at 10 a. m., at a hall to be designated hereafter. He asks that all competent and designated bodies and authorities name and issue credentials to the affixed number of delegates to the convention. The appointed delegates are requested promptly to forward their credentials to Dr. Noble P. Barnes, the Arlington Hotel, Washington, D. C., assistant secretary of the convention, who will file them for consideration of the committee on credentials, which will be appointed by the president, not later than March 1, 1920, in accordance with the by-laws. The membership of the convention is made up of three delegates from each of the following: incorporated medical colleges, medical schools connected with incorported colleges and universities; incorporated colleges of pharmacy, and pharmaceutical schools connected with incorporated colleges and universities; incorporated state medical associations; incorporated state pharmaceutical associations; the American Medical Association, and the American Chemical Society. Delegates are appointed, also, by the Surgeon-Generals of the United States Army, Navy and Public Health Service, the Secretary of Agriculture, and the Secretary of Commerce and Labor, the Association of Official Agricultural Chemists, the Association of State and National Food and Dairy Departments, the National Wholesale Druggists' Association, the National Dental Association and by organizations which were admitted to a representation in the convention of 1900.

New York Committee Announces Entertainments for Foreign Guests to the American Medical Association's Annual Session.—The New York City Committee on Reception and Entertainment of Delegates to the American Medical Association has announced the following tentative program for guests from foreign countries to take place on Monday, June 2. The delegates and other foreign physicians will leave the Hotel Waldorf-Astoria for the City Hall by automobile at 11 in the morning. At noon they will be received by the mayor of New York City, the commissioner of health, the commissioner of charities, the president of the board of aldermen, the borough presidents, the deans of the New York medical schools. An address of welcome will be made by the mayor. An opportunity will be afforded to inspect the municipal buildings. At 11:45 the committee will leave the city hall for the Battery where at 1 p. m. it will board the department of charities' steamship *Corrections*. A luncheon will be given to the foreign delegates while on the boat en route up the East River to Willard-Parker Hospital where the boat is scheduled to arrive at 2 o'clock. After an inspection of the laboratories at that hospital, the party will reembark at 2:30 to arrive at Bellevue Hospital at 3 o'clock. After inspection of this hospital, the party will again reembark at 3:30 o'clock, and under the direction of Commissioner Bird S. Coler will visit the Blackwell's Island institutions. They will leave Blackwell's Island at 4:30 o'clock for Randall's Island and the North Brother's Island institutions to visit Riverside Hospital and the health department hospital for drug addicts. Commissioner Royal S. Copeland will be in charge at this point. Physicians visiting New York will be welcome to join this group in inspecting these various institutions, and to attend other events which may be arranged in so far as it is possible to accommodate them after provision is made for the foreign physicians.

Bequests and Donations.—The following bequests and donations have recently been announced:

Eau Claire Hospitals, to be administered by the Visiting Nurse Association, a donation to endow a bed for a year.

Oakville, Tenn., Memphis Sanatorium, a bequest of $1,700 by the will of Frank Trimble.

Brockton (Mass.) Hospital, $5,000 by the will of Elden B. Keith, Brockton.

Lawrence (Mass.) General Hospital, $50,000 by the will of Charles H. Tenney, New York City.

FOREIGN

Personal.—Dr. Albert Calmette, former director of the Pasteur Institute at Lille and now subdirector of the Pasteur Institute in Paris, has been elected an active member of the section on public hygiene and legal medicine in the Paris Academy of Medicine.

Organization of Owners of Private Clinics in Denmark.—The *Ugeskrift for Læger* states that the physicians who have founded private clinics at Copenhagen and in the vicinity have organized and are inviting others throughout the country to join with them for mutual advantage, registering the capacity of the private clinic, the number of beds, and of trained nurses and other attendants and other data.

Prizes Offered by the Spanish Academy of Medicine.—The Real Academia Nacional de Medicina offers a prize for the best work on ferments and antiferments for medicinal use; on the present conception of neurasthenia; on the medical geography and topography of some region in the Asturias, or on an epidemic observed by the writer. The Rubio prize will be awarded for the best medical work published by a Spanish physician in the preceding two years, or the most useful medical invention or remedy.

Medical Congress in Spain.—The first Spanish National Congress of Medicine was held, April 20-25, at Madrid. The king and the minister of education were present at the opening session. Among distinguished foreigners in attendance who delivered lectures were Mme. Curie, the famous French physicist and discoverer of radium, Dr. Vidal of Paris, Dr. Da Fano of Italy and Dr. Wright of England. In connection with the congress was held an exhibition on medicine and hygiene. It is the intention to hold hereafter similar meetings periodically at different places in Spain.

New Hospital Opens.—The new general hospital of the American Church Mission in Wuchang, China, was formally opened, Dec. 14, 1918. The building is three stories in height, is of reenforced concrete and brick structure, is piped for steam heat, hot and cold water, has sanitary drainage, is lighted by electricity, and can accommodate 200 patients. The total cost of land and buildings was more than $100,000. The women's department, known as the Elizabeth Bunn Memorial Hospital, is under the care of Dr. Mary L. James, as superintendent, and the men's department, known as St. Peter's Hospital, is under the superintendency of Dr. C. McA. Wassell.

Northern League Against Tuberculosis.—Representatives of the organizations that have been formed in Denmark, Finland and Norway to combat tuberculosis met at Stockholm in March, on the invitation of the Swedish organization of the same nature. The purpose was to form a general Nordisk Forening mod Tuberkulose, to cooperate all means to stamp out tuberculosis in these northern lands, both the social service side as well as the medical side. An invitation was also sent to the Iceland Medical Society asking for their cooperation. Conferences on tuberculosis are planned. The first one is scheduled to be held at Stockholm in the summer of 1920.

Antivenereal Campaign in Spain.—By a royal decree there has been organized recently in Spain a permanent board to control venereal diseases which will have as its object the study of all measures proposed by the Spanish Antivenereal League, and reporting to the government in regard to the necessary means to combat these diseases. The first meeting of the new board was held in Madrid, April 1. According to the statement made by the director general of public health, Dr. Martín Salazar, it is the intention to follow generally the plan adopted in England, and create institutions for the prompt diagnosis and treatment of these diseases. The personnel of the board includes not only of some of the most prominent physicians of Spain but also of persons representing all social classes.

PARIS LETTER

Paris, May 1, 1919.

Smallpox Vaccination in Paris Factories Manufacturing War Material

In accordance with a decision of the undersecretary of state for the army medical corps the military personnel employed in government factories or engaged in work in connection with the national defense has been revaccinated against smallpox, the work having been assigned to the Paris headquarters of the army medical corps. Drs. E. Marchoux and Klotz reported at a recent meeting of the Académie de médecine the results obtained by this measure. This work was carried out between Jan. 17, 1917, and Dec. 31, 1918, in 4,000 factories distributed throughout the Paris military district. During this period 306,587 vaccinations were made with 124,168 "takes," more than 50 per cent. of which were successful. Because of the danger from infection on account of the contaminating nature of the work done by these persons, who worked with bared arms, only three light punctures were made with the point of the stylet used for this purpose.

Nervous and Mental Disturbances Following Influenza

Dr. Henri Claude reported to the Académie de médecine that he had seen some uncommon but benign nervous disturbances and frequent and serious mental disturbances during the convalescence from and as a result of influenza. The nervous disturbances consisted of various neuralgias, in keeping with the alterations in the nerves or their roots, and of asthenic symptoms in connection with myalgias. In one instance Claude observed a flaccid paralysis with sloughing and the necropsy showed hemorrhages into the gray matter of the cord, the result of considerable dilatation of the small vessels without any apparent inflammatory reaction. The mental disturbances which were noted in seven young women and one boy, aged 13, sometimes took on the form of acute delirium with agitation, violence, fear and erotic excitation, and, at other times, was of a depressive nature. In two cases ideas of persecution followed erotic excitation or a display of negativism. A cure resulted in four cases; three took a very serious turn; two of these terminated in death, and the third patient is recovering from a condition of manic excitement. Necropsy in the fatal cases demonstrated congestive lesions with small meningeal hemorrhages and especially in islands of edema in the cortical substance surrounding greatly dilated small vessels. Nowhere was there any evidence of inflammatory reaction, but the tissue cells were altered in these zones of vasodilatation and edema.

Congress on Social Hygiene

The end of this congress was marked by the adoption of certain resolutions which were the outcome of discussions. The section on school hygiene went on record as favoring the compulsory use of shower baths by schoolchildren; the section on hygienic housing interested itself in the use of new materials in the reconstruction of the regions devastated by the war; the section on sanitary prophylaxis endorsed the establishment of an interallied institute of social hygiene and of dispensaries to combat the disease, and to endow laboratories of bacteriology. It was also urged that shell holes be filled up to prevent the development of malaria; that all engineering work undertaken to supply the army with good drinking water be turned over to the respective communities; that a plan for new schools be submitted to a competent commission consisting of educators and physicians, and that all public carriers shall be required to comply with hygienic rules, such as frequent disinfection, prohibition of spitting, and segregation of smokers.

American Physician Decorated with Legion of Honor

Dr. Alexander Bruno, assistant director of the Rockefeller Tuberculosis Commission in France, has received the decoration of a chevalier of the Legion of Honor in recognition of the care and attention given by this American surgeon since 1916 to the French wounded in the hospitals and of his most valuable cooperation in the organization of the campaign against tuberculosis in France.

French Physicians Honored

Dr. Lejars, professor of external pathology on the Paris medical faculty, and consulting surgeon of the Tenth Army Corps, has received a citation, in the order of the day, for his wise counsel and unselfish devotion to duty.

Dr. H. Somen, médecin aide-major of the first class, has received the decoration of a chevalier of the Legion of Honor for his devotion to duty, energy and bravery. He was wounded three times and has received six citations.

LONDON LETTER

London, May 8, 1919.

A Postgraduate Medical Association

At the Royal Society of Medicine a meeting has been held to discuss the formation of a postgraduate medical association. The basis of the discussion was the scheme described in a previous letter to The Journal. Sir William Osler, who presided, said that there were three possibilities: to extend existing postgraduate schools; to establish separate colleges; or to unite the medical schools, postgraduate colleges and special hospitals in an association which would consolidate all the teaching interests. The last had been chosen as the most hopeful. These various schools and hospitals had consented to arrange special classes and to give facilities for research work and general study. Arrangements, it was hoped, would be made for utilizing the enormous material in the fever hospitals and Poor Law infirmaries, and to give special students an opportunity to study problems relating to public health and preventive medicine. In connection with the representative council, to be set up there would be a permanent secretarial staff, whose duties would be to keep in touch with every medical school in the United States, the dominions, India and Egypt, so that at least every quarter there would appear on the bulletin board of these schools abroad information about postgraduate work in the United Kingdom; also to receive students on arrival in London, and to provide weekly information as to postgraduate facilities. The secretary's office, in fact, would combine the functions of a clearing house and of a university registry. Branch offices could be established at the provincial schools, and it was to be hoped that there would be cooperation with a similar organization in Scotland and Ireland. There would be interchange of information with the Paris Postgraduate Committee; and British students wishing to visit the United States or the dominions for graduate work could find in the central bureau up-to-date information. Another point of importance was the organization in each county center of a yearly postgraduate course of ten days or two weeks, free, or at a very small cost, to all physicians of the neighborhood. Such classes might be held at the county hospitals, and the central organization could be of great help in furnishing special teachers.

Prof. G. E. MacLean (director of the American Universities' Union) pledged the cooperation of that body. When America came into the war 153 of the leading universities and colleges in the United States organized that union to look after the college men in the American Expeditionary Forces. The headquarters of the union were in Paris, and there was one branch in London, and one in Rome. Now the war was over it was hoped to retain the league of universities as an "anchor to the windward" for the League of Nations. Its aim was to bring about interchange of professors and students, and to serve as a clearing house of information, including the giving of particulars to British students as to opportunities for study in the United States.

The following resolution was carried unanimously: "That each London undergraduate medical school be invited to appoint two representatives to serve on the council of the association, and that all other participating institutions be invited to appoint one representative. That the board of education, the medical research committee, the dominions of Canada, Australia, New Zealand, and South Africa, and the United States be invited to appoint one representative each. That the council shall have power to co-opt on the council of the association not more than five distinguished laymen interested in medical education.

The Prevention of Anthrax

A bill has been read a second time in the House of Commons to control the importation of goods infected, or likely to be infected, with anthrax and to provide for their disinfection. In spite of all precautions there has been a steady increase in the number of cases of anthrax in this country. Between 1911 and 1915 there were 164 cases, and between 1915 and 1918, three years only, there were 198. The proportion of fatal cases is approximately 25 per cent. Internal anthrax is almost universally fatal. The bill contains two main provisions. It gives power to prohibit the importation of goods infected or likely to be infected, either absolutely or except at certain specified ports, and it empowers the secretary of state to provide and maintain the necessary works for the disinfection of goods, and to make rules for the payment of fees by the importers of such goods. The cost for setting up the first station for this work was estimated on a prewar basis at $90,000.

Deaths

Henry Davidson Fry ⊕ Washington, D. C.; University of Maryland, Baltimore, 1876; aged 66; professor of obstetrics and clinical professor of gynecology in the Georgetown University, Washington from 1895 to 1917, and since that time emeritus professor of obstetrics; professor of obstetrics in the Washington Post-Graduate Medical School; gynecologist to Garfield Memorial Hospital, and obstetrician to the Columbia Lying-In and Georgtown University hospitals; vice president of the American Gynecological Society in 1904; died at his home, May 12.

Albert Anderson ⊕ Estherville, Iowa; State University of Iowa, Iowa City, 1890; aged 57; also a pharmacist; division surgeon for Burlington, Cedar Rapids and Northern Railway from 1896 to 1902 and since 1902 local surgeon for the Rock Island system; founder of the Anderson Hospital, Estherville; for four years a member of the city council and for several terms a member and president of the board of education; died in the Anderson Hospital, Estherville, May 12, from cerebral hemorrhage.

Warren Fielding Scott ⊕ Lieut., M. C., U. S. Army, Palulah, La.; Tulane University, New Orleans, 1912; aged 30; who served for nine months with the British forces in Flanders and later with the American Expeditionary Forces in Base Hospital No. 24, and was discharged from the service, April 28, at Camp Merritt, N. J.; died in Vicksburg, Miss., May 12, from spinal meningitis.

William H. Bennett ⊕ Atlantic City, N. J.; University of Pennsylvania, Philadelphia, 1869; aged 75; formerly a practitioner of Philadelphia; for many years president of the board of St. Christopher's Hospital and for forty-seven years president and physician in charge of the Children's Sea Side Home, Atlantic City; died at his home, May 14, from cerebral hemorrhage.

Theophilus Caliway Robinson, Long Beach, Calif.; Hahnemann Medical College of the Pacific, San Francisco, 1902; aged 51; who served as a captain, Medical Corps, U. S. Army, at Fort Riley, Kan., and was operated on there for tumor of the bladder, and was honorably discharged from the service, Nov. 15, 1918; died at his home, May 2.

Robert Leach, Columbus, Ohio; Ohio Medical University, Columbus, 1897; aged 45; a specialist in surgery; formerly local surgeon of the Baltimore and Ohio, and Baltimore and Ohio Southwestern railways at Mount Sterling, Ohio; died at his home, May 12, from myocarditis following articular rheumatism.

David Gamble Murrell, New Orleans; Hospital College of Medicine, Louisville, Ky., 1878; aged 70; a Confederate veteran; for several years professor of anatomy in his alma mater, and later a practitioner of Paducah, Ky., where he organized the Railroad Hospital; died at his home, May 17.

Charles H. Raffety, Portland, Ore.; Willamette University, Salem, Ore., 1869; aged 80; also a pharmacist; one of the first mayors of East Portland; for eighteen years a member of the Portland water board; died at his home, May 10, from cerebral hemorrhage.

Thomas Harold Orser ⊕ Capt., M. C., U. S. Army, Cold Brook, N. Y.; Queen's University, Kingston, Ont., 1902; aged 45; visiting physician to the Harlem Dispensary; assistant clinician to the New York University Dispensary; died at his home, April 20.

Junius A. Woolfolk, Thruston, Ky.; University of Louisville, Ky., 1877; aged 62; a member of the Kentucky State Medical Association; died at his home, May 13, from injuries sustained when an automobile collided with a buggy which he was driving.

Joseph Webster Heath, Wakefield, Mass.; Bowdoin Medical School, Brunswick and Portland, Me., 1877; aged 65; past president of the Middlesex East District Medical Society; died in his office, May 15, from cerebral hemorrhage.

Foster Sudler, Sudlersville, Md.; University of Pennsylvania, Philadelphia, 1896; aged 49; vice president of the Sudlersville Bank; who had been a sufferer from tuberculosis for five years; died from that disease at his home, May 8.

⊕ Indicates "Fellow" of the American Medical Association.

narrow study of one or more exciting causes into the nervous power that makes their operation possible, and, by viewing it from every angle and from a higher vantage ground, let us hope to hasten the coming of the day when the whole subject shall be lifted out of the dust of controversy and out of the darkness of hypothesis into the light of imperishable fact.

John N. Mackenzie, Baltimore.

THE ADMINISTRATION OF ARSPHENAMIN

To the Editor:—In your issue of May 10 you publish a letter from the director of the Hygienic Laboratory, U. S. Public Health Service, in which he declares it as a requisite to safe administration of arsphenamin that 0.1 gm. of the drug should be dissolved in at least 30 c.c. of fluid and that each injection of 0.3 gm. of the drug should require at least six minutes.

While I recognize that it is a wise policy to be overcareful in the administration of such a powerful drug and to err, if at all, on the safe side, I must take issue with the concluding remarks: "any physician who fails to observe these precautions should be considered as directly responsible for serious results that follow the improper use of the drug." As a matter of fact, I can state that in the many thousand injections which have been given in my service at Mount Sinai Hospital, it has been the standard rule to dissolve each 0.1 gm. in 20 c.c. of freshly distilled water, and to inject it, not with undue haste, but only in exceptional cases where small veins require the use of small needles, as slowly as Dr. McCoy suggests. The average injection takes about half the time defined by him as the minimum.

It is not in the spirit of controversy but with the aim of protecting the medical profession that I ask you to publish this letter, for I realize that if the occurrence of unavoidable reactions, rare as they are, should lead to a suit for malpractice, a well meant but too apodictical statement from such an authoritative source might be detrimental to a member of the profession.

H. Goldenberg, M.D., New York.

REPRINTS ON DISORDERS OF THE BLOOD

To the Editor:—I am setting out to make a collection of reprints and cuttings from the medical press of papers dealing with the clinical and experimental aspects of disorders of the blood. I have already about 2,000. These are indexed and filed and will, I hope, prove of permanent value.

American literature is not so well represented as I could desire. I have most of the papers on Gaucher's splenomegaly and excerpts from your own pages for the last few years, but much is still lacking. Would you be so good as to print this letter and allow me to ask those interested in the subject to send me any reprints they have.

Accounts of disease chacterized by abnormal shapes of the red cells and by abnormal phagocytosis are practically confined to American literature; there also one looks for much of the work on the spleen and nearly all that on hemolymph glands; purpura is much more fully dealt with than in English literature, and, generally speaking, we have little to compare with your experimental work.

It would be impossible for me to write to each author individually or to keep track of every paper published. Nor can I subscribe to all the journals in which this work is found.

If any reprints of my own are of sufficient interest, I shall of course be delighted to exchange them. Any reprints sent will be acknowledged at once.

I thank you in advance for your courtesy.

Gordon Ward, M.D.,
The Vine, Sevenoaks, Kent, England.

A Foresight.—I hope to live to see the time when the increased efficiency in the public health service—federal, state and municipal—will show itself in a greatly reduced death rate. The federal government can give a powerful impulse to this end by creating a model public health service, and making our national capital a model, sanitary city.—President Taft.

Queries and Minor Notes

Anonymous Communications *and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.*

GLUTEN FLOUR FOR DIABETES

To the Editor:—Will you give me the address of a company which makes gluten flours to be used in the treatment of diabetic patients? Do you consider gluten flour reliable in the treatment of diabetes?

C. T. Pankhurst, M.D., North Star, Mich.

Answer.—Gluten flour is not a "treatment" for diabetes in the sense that it has any remedial value. The treatment of diabetes is essentially dietetic and hygienic, drugs playing a minor rôle. An important feature of the dietetic treatment is the restriction of the carbohydrate intake. As the commonest of the carbohydrate-containing foods is bread, the problem of substituting for ordinary bread a product somewhat similar in character, but without so high a starch content, becomes important. Gluten flours have been developed for this purpose. They are essentially wheat flours from which a large proportion of the starch has been removed, leaving a proportionate excess of the protein element (gluten). It thus becomes obvious that the important element in gluten flours is not the presence of larger amounts of protein, but the comparative absence of starch. There are many so-called gluten flours on the market which are extremely dangerous for use in diabetes because of the large proportion of starch they contain. A safe gluten flour is marketed by Herman Barker, Sommerville, Mass. This has been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies. The Barker product comes in three grades: Grade A contains 4 per cent. carbohydrate; Grade B, 7 per cent.; Grade C, 12 per cent. Certain flours for the use of diabetics in making breads, muffins, etc., that are low in carbohydrate content have also been admitted to N. N. R. These, however, do not have wheat flour as their base, and are therefore not gluten flours, the protein element being derived from the soy bean in one case and from milk casein in another.

ABSORPTION OF WATER FROM THE STOMACH

To the Editor:—I have been taught that water is not absorbed from the stomach. Dr. Casares (The Journal, May 3, 1919, p. 1336) speaks repeatedly to the contrary. Both cannot be right. Is there anything new concerning this question, pro or con?

Edgar A. Hall, M.D., Coal City, Ill.

Answer.—The article referred to is on the "Treatment of Malaria" by J. M. Casares y Bescanza, published in *Plus Ultra*, Madrid, p. 186, and abstracted in The Journal of May 3. According to most physiologic textbooks, water is not absorbed from the stomach. Fluids pass through the stomach rapidly and are absorbed from the intestine. For years physiologic laboratories have given to medical classes a practical demonstration of this fact. A cat is lightly anesthetized, and 50 c.c. of distilled water heated to 37 C. is introduced into the empty stomach, the cardiac orifice of the stomach having previously been ligated off and a ligature placed about the pylorus. A similar amount of water is introduced into the small intestine, both ends of which are closed by ligatures. Care is taken *not* to interfere with the blood supply to the stomach or intestine. The animal is allowed to recover from the anesthetic and after from three to four hours is again anesthetized. The gastric and intestinal contents are measured, and the stomach is found to contain, on the average, about 47 c.c. of the water introduced—sometimes more, sometimes less; the intestines are invariably empty. Hence, the stomach absorbs practically none of the water, while the intestines absorb all. The slight apparent absorption from the stomach—3 c.c. in three hours—may be accounted for by the adherence of some of the water to the mucous membrane, and this water cannot be recovered. Experiments have shown that absorption of pure distilled water from the stomach is practically nil.

Saline solutions, however, are absorbed from the stomach in appreciable degree when in comparatively high concentration. Howell writes of sodium iodid solution that "Not until its solutions reach a concentration of 3 per cent. or more does its absorption become important." Experiments have shown that solutions of strychnin are absorbed from a Pawlow's stomach of a dog, precluding the possibility that the solutions were passed into the intestine before absorption. Sugars are likewise absorbed, particularly in concentrated form, according to a number of authors. Aminoacids are absorbed from the stomach; Folin found that urea is also absorbed. The question of the absorption of fat by the stomach has been affirmed and denied.

Dr. Ivy, working in the laboratory of the University of Chicago, found no evidence in his work or in the literature that distilled water as such is absorbed by the stomach. Regarding its rate of evacuation, Dr. Ivy has written an article on "Studies on Water Drinking" in the *American Journal of Physiology*, July, 1918 (volume 46, No. 4, p. 429). As judged from his own series of experiments on this point, he concludes that "the emptying of water from the normal stomach varies, conservatively, from 400 c.c. to 100 c.c. in fifteen minutes." It is a fact, as verified by Dr. Ivy and recorded by him, that "the greater the amount of fluid, the more rapidly does it leave the stomach."

So far as known, no one has worked with solutions of quinin. It is possible that they are absorbed slightly, just as are other diluted solutions. It is more probable, however, that they are passed into the intestine and that the real absorption occurs in that viscus.

LICENSURE OF DISCHARGED MEDICAL OFFICERS

To the Editor:—It has been rumored that some state licensing boards will register discharged medical officers of the United States Army without further examination. A statement of the facts will be appreciated.

C. W. A.

Answer.—The laws in seven states—Alabama, California, Colorado, Illinois, North Dakota, Virginia, West Virginia—and in Porto Rico authorize the licensing boards in their discretion to register, without further examination, retired medical officers of the United States Army, Navy and Public Health Service, if, in their opinion, those candidates have undergone a test of their educational qualifications fully equal to that required in the respective states. The secretaries of the several state boards have written that this arrangement does not apply to the civilian physicians who entered the government services during the recent war emergency, since the latter were not required to undergo the severe tests applied to the regular officers of the services named. Attention is called, however, to the liberal provision made by most of these states for registration by reciprocity. —[Full information in regard to reciprocity in all states is contained in a book entitled "Laws and Board Rulings." A copy of this book will be sent to any address on receipt of 50 cents.]

GATHERING INFLUENZA STATISTICS

To the Editor:—In one of the Journals which I have read this year I recall a note regarding a department or bureau of statistics, either in Chicago or Washington, devoted to compilation of data relative to influenza and related respiratory conditions during the epidemic from August, 1918, to May, 1919. Will you kindly inform me where I can get such statistics?

F. S. Minns, M.D., Toronto, Can.

Answer.—A joint committee was created in February, 1919, for the purpose of studying the epidemic and gathering statistics. The members of the committee are: Dr. William H. Davis, Bureau of the Census, Washington, D. C., chairman; Mr. C. S. Sloane, representing the Bureau of the Census; Dr. Wade H. Frost and Mr. Edgar Sydenstricker of the Public Health Service; Col. D. C. Howard, Col. F. F. Russell and Lieut.-Col. A. G. Love, U. S. Army; Lieut.-Com. J. R. Phelps and Surg. Carroll Fox, U. S. Navy.

INTERCOSTAL PAIN FOLLOWING HERPES ZOSTER

To the Editor:—Please tell me what can be done for a severe intercostal pain that has persisted for three years following herpes zoster. The patient states that the pain is as severe now as it was when the attack began.

J. W. W., Chicago.

Answer.—The possibility of spinal tumor, caries or aneurysm should be borne in mind in these cases. The treatment of this intercostal pain, a common sequence of herpes zoster, should be directed in view of the diagnostic findings. The neurotic factor is often present, requiring psychic treatment. Light blistering over the painful points may help. Local warmth and restriction of movement of the ribs by a bandage are often serviceable. Stretching the nerves and resection of the ribs has been done, but not always with success. Sometimes alcohol is injected subcutaneously over the painful points or as close to the nerve trunk as possible.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama: Montgomery, July 8. Chairman, Dr. S. W. Welch, State Capitol, Montgomery.

Arizona: Phoenix, July 1. Sec., Dr. Allen H. Williams, 219 Goodrich Bldg., Phoenix.

California: San Francisco, June 23-26. Sec., Dr. Charles B. Pinkham, 904 Forum Bldg., Sacramento.

Colorado: Denver, July 2. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.

Connecticut: New Haven, July 8-9. Sec., Regular Bd., Dr. Charles A. Tuttle, 196 York St., New Haven; Sec., Homeopathic Bd., Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven; Sec., Eclectic Bd., Dr. James E. Hair, 730 State St., Bridgeport.

Delaware: Wilmington, June 17-19. Sec., Dr. H. W. Briggs, 1026 Jackson St., Wilmington.

District of Columbia: Washington, July 8-10. Sec., Dr. E. P. Copeland, The Rockingham, Washington.

Florida: Jacksonville, June 16-17. Sec., Dr. W. M. Rowlett, Citizens Bank Bldg., Tampa.

Florida: Eclectic Board, Jacksonville, June 9-10. Sec., Dr. G. A. Munch, 1306 Franklin St., Tampa.

Georgia: Atlanta and Augusta, June 5-6. Sec., Dr. C. T. Nolan, Marietta.

Illinois: Chicago, June 16-19. Supt. of Registration, Mr. F. C. Dodds, Springfield, Ill.

Iowa: Iowa City, June 12-14. Sec., Dr. Clifford H. Sumner, Capitol Bldg., Des Moines.

Kansas: Topeka, June 17. Sec., Dr. H. A. Dykes, Lebanon.

Kentucky: Louisville, July 1-3. Sec., Dr. J. N. McCormack, Bowling Green.

Louisiana: New Orleans, July 1-3. Sec., Dr. E. W. Mahler, 141 Elk Place, New Orleans.

Maine: Augusta, July 1-2. Sec., Dr. Frank W. Searle, 776 Congress St., Portland.

Maryland: Baltimore, June 18-21. Sec., Dr. J. McP. Scott, Hagerstown.

Massachusetts: Boston, July 8-10. Sec., Dr. Walter P. Bowers, State House, Boston.

Michigan: Ann Arbor, June 10-12. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

Minnesota: Minneapolis, June 3-6. Sec., Dr. T. S. McDavitt, 741 Lowry Bldg., St. Paul.

Mississippi: Jackson, June 24-25. Sec., Dr. W. S. Leathers, University.

Missouri: St. Louis, June 9-11. Sec., Dr. George H. Jones, State House, Jefferson City.

National Board of Medical Examiners: Philadelphia, June 2-7. Sec., Dr. J. S. Rodman, 1310 Medical Arts Bldg., Philadelphia.

Nebraska: Lincoln, June 30-July 2. Sec., Dr. H. J. Lehnhoff, 514 First National Bank, Lincoln.

New Jersey: Trenton, June 17-18. Sec., Dr. Alex. MacAlister, 438 E. State St., Trenton.

New Mexico: Santa Fe, July 14. Sec., Dr. R. E. McBride, Las Cruces.

New York: Albany, Buffalo, New York and Syracuse, June 24-27, Mr. George M. Wiley, director, Exam. and Inspections Div., State Edu. Bldg., Albany.

North Carolina: Raleigh, June 23. Sec., Dr. H. A. Royster, 423 Fayetteville St., Raleigh.

North Dakota: Grand Forks, July 1-4. Sec., Dr. G. M. Williamson, 860 Belmont Ave., Grand Forks.

Ohio: Columbus, June 3-6. Sec., Dr. H. M. Platter, State House, Columbus

Oklahoma: Oklahoma City, July 8-9. Sec., Dr. J. J. Williams, Weatherford.

Oregon: Portland, July 1-3. Sec., Dr. Frank W. Wood, 559 Morgan Bldg., Portland.

Pennsylvania: Philadelphia and Pittsburgh, July 8-10. Sec., Nathan C. Schaeffer, State Capitol, Harrisburg.

Rhode Island: Providence, July 10-11. Sec., Dr. B. U. Richards, State House, Providence.

South Carolina: Columbia, June 10. Sec., Dr. A. Earle Boozer, 1806 Hampton St., Columbia.

South Dakota: Deadwood, July 8. Sec., Dr. P. B. Jenkins, Waubay.

Tennessee: Knoxville, Memphis and Nashville, June 13-14. Sec., Dr. A. B. De Loach, Exchange Bldg., Memphis.

Texas: Austin, June 24-26. Sec., Dr. M. F. Bettencourt, Mart.

Utah: Salt Lake City, July 7-8. Sec., Dr. G. F. Harding, 407 Templeton Bldg., Salt Lake City.

Vermont: Burlington, June 26-28. Sec., Dr. W. Scott Nay, Underhill.

Virginia: Richmond, June 17-20. Sec., Dr. J. W. Preston, 215 S. Jefferson St., Roanoke.

Washington: Seattle, July 1-3. Sec., Dr. C. N. Suttner, 415 Old National Bank Bldg., Spokane.

West Virginia: Huntington, July 8-10. Sec., Dr. S. L. Jepson, Masonic Bldg., Charleston.

Wisconsin: Milwaukee, June 24-26. Sec., Dr. J. M. Dodd, 220 E. 2nd. St., Ashland.

Wyoming: Cheyenne, June 23-25. Sec., Dr. H. E. McCollum, Laramie.

New Hampshire March Examination

Dr. Charles Duncan, secretary of the New Hampshire State Board of Medical Examiners, reports the written examination held at Concord, March 13-14, 1919. The examination covered 9 subjects and included 80 questions. An average of 75 per cent. was required to pass. Four candidates were examined, all of whom passed. Three candidates were licensed through reciprocity. The following colleges were represented:

College PASSED	Year Grad.	Per Cent.
Boston University	(1918)	78
Harvard University	(1919)	81
Tufts College Medical School	(1919)	82
University of Pennsylvania	(1918)	85

College LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
Boston University	(1917)	Mass.
University of Vermont	(1883) (1898)	Vermont

District of Columbia April Examination

Dr. Edgar P. Copeland, secretary of the Board of Medical Supervisors of the District of Columbia, reports the oral and written examination held at Washington, April 8-10, 1919. The examination covered 16 subjects and included 80 questions. An average of 75 per cent. was required to pass. Of the 9 candidates examined, 8 passed and 1 failed. One candidate was licensed through reciprocity. The following colleges were represented:

College PASSED	Year Grad.	Per Cent.
Georgetown University	(1916)	85.2
George Washington University	(1911) 84.2; (1918)	92.5
Howard University	(1916)	77.8
Bowdoin Medical School	(1918)	76.6
Johns Hopkins University	(1913) 91.7; (1918)	91.7
McGill University	(1910)	85.7
FAILED		
Chicago Hospital College of Medicine	(1918)	63.6

College LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
Medical College of Virginia	(1912)	W. Virginia

Oregon January Examination

Dr. Frank W. Wood, secretary of the Oregon State Board of Medical Examiners, reports the written examination held at Portland, Jan. 7, 1919. The examination covered 11 subjects and included 90 questions. An average of 75 per cent. was required to pass. Of the 17 candidates examined, 14, including 2 osteopaths, passed, and 3 failed. The following colleges were represented:

College PASSED	Year Grad.	Per Cent.
Northwestern University	(1907)	80.9
Kansas Medical College	(1897)	79.1
University of Minnesota	(1895)	82.9
John A. Creighton Medical College	(1902)	79.7
Albany Medical College	(1899)	80.1
University of Oregon (1918) 80.1, 83.1, 84.2, 85.4, 88.1, 90.1.		
Jefferson Medical College	(1916)	82.6
FAILED		
Hospital College of Medicine	(1894)	66.2
Missouri Medical College	(1895)	68.3
Gate City Medical College*	(1908)	71

* Official reports state that recognition was withdrawn from this school by the Texas State Board of Medical Examiners in November, 1907; that the dean, Dr. J. W. Decker, was caught selling diplomas in 1911, and was convicted and sentenced to fifteen months' imprisonment.

Rarity of Trachoma in Guatemala.—R. P. Luna states that for twelve years he has been seeking trachoma in his service of ophthalmology at the general hospital in Guatemala, and he has never found a case except imported ones. His communication on the subject, published in the *Juventud Medica* of Guatemala **18**:13, 1918, relates that certain persons deported from North American ports on account of trachoma proved to have merely a simple conjunctivitis which healed readily under ordinary measures. Grayish-whitish scar lines, granulations and pannus are unmistakable when encountered together, but the differential diagnosis in other stages of trachoma is often extremely difficult. Guatemala seems to be one of the favored countries which escape the disease, and where it does not spread when imported, not even to the wife, children or servants. On the other hand, Guatemalans may contract the disease in other lands; the individual and collective immunity seems to be peculiar to the country itself.

Book Notices

A TEXTBOOK OF PATHOLOGY WITH A FINAL SECTION ON POST-MORTEM EXAMINATIONS AND THE METHODS OF PRESERVING AND EXAMINING DISEASED TISSUES. By Francis Delafield, M.D., LL.D., and T. Mitchell Prudden, M.D., LL.D., Emeritus Professor of Pathology, College of Physicians and Surgeons, Columbia University. Eleventh edition. Revised by Francis Carter Wood, M.D., Director of the Pathological Department, St. Luke's Hospital, New York. Cloth. Price, $7.50. Pp. 1354, with 824 illustrations. New York: William Wood & Co., 1919.

Dr. Wood has made a very thorough and careful revision of Delafield and Prudden's well known book, following as closely as possible the plan of previous editions. The many new references to recent literature, especially American, will prove helpful. The illustrations, many of them new, are, almost without exception, highly satisfactory; indeed, only a few, as, for instance, Figure 566, pertaining to tuberculous nephritis, need be replaced by better ones. Figure 462, illustrating gelatinous carcinoma of the stomach, does not seem quite clear enough and should not, as it is now, be referred to as showing, in the strict sense, diffuse infiltrating carcinoma of the stomach. A few minor mistakes have been noted, as, for instance, on page 178—"much experimental data has been brought forward." The rule that the scientific names of bacteria shall be binomial is disregarded in some cases; fusiform bacilli probably merit a little more attention than they have received, and there is no reference to them in the index. No reference is made to recent American articles on hemorrhage into the suprarenals. This book deservedly still holds its place as a standard textbook for students and practitioners.

TUBERCULOSIS OF THE LYMPHATIC SYSTEM. By Walter Bradford Metcalf, M.D., Associate in Clinical Medicine, University of Illinois. Cloth. Price, $2.75. Pp. 216, with illustrations. New York: The Macmillan Company, 1919.

This book is written in a rather fluent style and is devoted largely to a random, and, not infrequently, second-hand review of the literature bearing on the subject of tuberculosis of the lymphatic system. It does not deal with the results of any investigative work on the part of the author except so far as it summarizes his experience in the treatment of lymphatic tuberculosis with tuberculin. The influence an attack of measles may have on the tuberculin reaction is not stated correctly, and no mention is made of the fact that the reaction may be suspended on account of measles. The word toxin is used rather loosely.

In the earlier chapters the capitalization is sometimes rather freaky, quite a few of the names of authors quoted are misspelled, and the references are given in a most haphazard sort of a way. While there are many defects the parts dealing with diagnosis and treatment are creditable and reveal good sense and sound judgment.

DIAGNOSTIC CLINIQUE: EXAMENS ET SYMPTOMES. Par le Dr. Martinet. Paper. Price, 30 francs. Pp. 912, with 783 illustrations. Paris: Masson et Cie, 1919.

From the beginning of the new diagnostic science, most significant of which was Laennec's invention and use of the stethoscope a century ago, the French have contributed their share to the art of making clinical diagnosis more thorough, more accurate and more useful. The plan of Dr. Martinet's book is simple, his aim having been to meet as fully as possible the needs of the average practitioner. He presents in detail the two steps that enter into diagnosis: the collection of signs and symptoms by means of the clinical history and the examination, and the coordination of the data obtained so that the character of the disease may be inferred. The complete diagnosis is for him the sum of four partial diagnoses: clinical or syndromatic, lesional or anatomic, functional or physiologic, and causal or etiologic. The book is divided into three parts. In the first, entitled "Généralités," the author discusses the characteristics of a good diagnosis and the errors that may occur. He also reviews rather succinctly the nosologies in favor at various periods, ending with the etiologic classification proposed in 1905 by Lancereaux and Paulesco. A chapter is devoted to errors in diagnosis and their causes which he apportions among ignorance, deficient examinations and errors of judgment. The second part called "Techniques," is divided into three headings: special; general which includes parasitology and bacteriology; and anthropometry. In the first subdivision the various systems of the body are considered separately. In the third part the methodical organization of data is considered and principles established to assist in medical examinations in ordinary calls, in consultation, and in special consultations. Symptoms are discussed, and grouped into practical and suggestive tables. The book has 783 illustrations, a number of which are in colors, many new and some so well designed that a glance suffices to give an understanding of the technic they represent. The descriptions are written in a clear style and free from all unessential details. An English translation of this unusual book on diagnosis should prove worth while.

Medicolegal

Prosecution for Advertising as a Physician

(State v. Kaatz (Vt.), 104 Atl. R. 873)

The Supreme Court of Vermont finds no error in this case, where the respondent was prosecuted for, and convicted of, advertising and holding himself out to the public as a physician and surgeon without being licensed as required by law. The court says that he demurred to the information, and, on his demurrer being overruled, moved to have the case sent to the supreme court before final trial, which motion was also overruled, to which action he excepted. The case was then tried by jury, and a verdict of guilty was found, and the case came to the supreme court on the exceptions to the overruling of the demurrer and motion. The only ground of demurrer stated in his brief was that the information did not specifically charge him with having "practiced medicine without a license." But the prosecution was not for practicing medicine contrary to law, and it was unnecessary to allege that he practiced medicine without a license, and the information was not subject to demurrer for failure to so allege. As to his exception to the refusal of the trial court to pass the case to the supreme court before final trial, no authorities were cited in his brief supporting this exception, and none, the supreme court thinks, can be found. It was a matter wholly within the discretion of the trial court, and being within the discretion of the trial court, and it not appearing that that discretion had been abused, it was not reviewable by the supreme court, the judgment of which is that there was no error, and that the respondent take nothing by his exceptions; let execution be done.

Loss of Use Considered Equivalent to Loss of Eye

(Smith v. F. & B. Construction Co. et al. (N. Y.), 172 N. Y. Supp. 581)
(Hobertis v. Columbia Shirt Co., Inc., et al. (N. Y.), 173 N. Y. Supp. 606)

The Supreme Court of New York, Appellate Division, Third Department, in the Smith case affirms an award by the state industrial commission of compensation under the workmen's compensation law for the "permanent loss of use of the right eye considered as the equivalent of the loss of such eye," where it appeared that with the use of powerful glasses the claimant had a vision of about one third with that eye, but that in order to obtain it he must close the other eye; that in any event he could have only one eye, and if he used the injured eye he had the vision of but one third of an eye. The court distinguishes the case from one in which by the use of glasses the claimant had the normal vision of the nijured eye, while, without glasses, he had the vision of but one eye, and with the use of glasses had the normal vision of the other eye only; in any event, had the full vision of one eye, and could use either eye at pleasure.

In the Hobertis case, the same court affirms an award of the state industrial commission for the permanent loss of the use of an eye, where the claimant was nearsighted, having not to exceed 50 per cent. vision, and lost the use of an eye, and it was contended that she should be allowed for the loss of half-vision only. The court says that the statute does not provide that the loss of the use of an eye shall be compensated by an award based on the amount of vision which existed previous to the accident, whether it be 50 per cent. or 80 per cent. of vision lost. It awards specific compensation for the loss of an eye. It is matter of common knowledge that very few persons have complete and perfect vision. The claimant was working with defective vision. So far as appeared, her work was entirely satisfactory to her employer, at least so far as the wages she received. The wages received by her must be considered her wage-earning capacity with defective vision. She lost the use of her eye, such as she had, and was entitled to compensation therefor, based on her earning capacity.

No Proof of Registration

(Reum v. State (Tex.), 206 S. W. R. 523)

The Court of Criminal Appeals of Texas reverses a conviction of defendant Reum, and remands the case, because the trial court instructed the jury that in this case it did not devolve on the state to prove that the defendant did not have a license or diploma, with verification of same, and did not have same registered, and the prosecution introduced no proof at all showing or tending to show that the defendant had not registered in the district clerk's office, as required by the statute, her authority to practice medicine. For this error the case must be reversed. But the court did not err in excluding the testimony of the district clerk, offered by the defendant, and the record in his office in the register of physicians and surgeons showing certain entries made in February, 1900, under an old law that was then in force, as the law under which those entries were made has long since been repealed, and the statute under which this prosecution was based prescribed an entirely different record and registration.

Rights Not Lost by Efforts to Save Finger

(Enterprise Fence & Foundry Co. v. Majors (Ind.), 121 N. E. R. 6)

The Appellate Court of Indiana, Division No. 2, says that the injury suffered by plaintiff Majors, while in the employ of the defendant company, consisted of a twist and laceration of the index finger of the right hand. The industrial board found that at the time of the injury the attending surgeon employed by the company at first advised the amputation of the index finger, but the plaintiff remonstrated and insisted that the finger should be saved if possible, and, in response to his objection, the attending physician advised that he had saved fingers as badly injured as that one, and it was agreed to make an effort to save the finger. The finger was treated for about a month or a little more, in an endeavor to save it, but an infection developed which involved practically the whole of the hand, and made necessary the amputation of the index finger, which was amputated at the middle joint. The infection developed because of the delay in amputation. An award was agreed on for the loss of the index finger; but the plaintiff subsequently asked for additional compensation because the second and ring fingers of his right hand were left stiff and permanently injured. This was opposed by the company on the ground that the plaintiff could not recover compensation for a permanent injury to his hand, when the permanent injury was due to his refusal to permit the attending surgeon to perform a surgical operation not of itself dangerous or attended with extraordinary suffering, which, if it had been performed when it was advised, would have prevented infection and saved the permanent impairment complained of. The court agrees that the law seems to be well settled that an injured employee seeking compensation must submit to an operation which will cure him when so advised by his attending physician, when not attended with danger to life or health or extraordinary suffering, and, if as a result of a refusal on his part he suffers a permanent impairment, the employer will not be required to compensate him for the resulting permanent impairment. But the court considers that the plaintiff's insistence that his finger be saved if possible, when taken with the statement made by the surgeon; was not such unreasonable or wilful misconduct as would prejudice the allowance of additional compensation. In other words, the court is satisfied, under all the evidence, that the industrial board was justified in reaching the conclusion that the plaintiff's second and ring fingers had become in part permanently impaired after the agreed award for the loss of the index finger, and it was warranted in granting an additional award for the partial permanent injury to the second and ring fingers, which were left stiff owing to an infection.

Society Proceedings

COMING MEETINGS

American Medical Association, Atlantic City, June 9-13.

American Academy of Medicine, Atlantic City, June 9-10.
American Association of Anesthetists, Atlantic City, June 9-10.
Am. Assn. of Genito-Urinary Surgeons, Atlantic City, June 16-17.
Am. Assn. of Indust. Physicians and Surgeons, Atlantic City, June 9.
Am. Assn. of Pathologists & Bacteriologists, Atlantic City, June 16-17.
American Association of Physicians, Atlantic City, June 16-17.
American Climatological & Clin. Assn., Atlantic City, June 14-17.
American Dermatological Association, Atlantic City, June 16-18.
American Gastro-Enterological Assn., Atlantic City, June 9-10.
American Gynecological Society, Atlantic City, June 14.
American Medico-Psychological Assn., Philadelphia, June 18-20.
American Neurological Association, Atlantic City, June 16-18.
American Ophthalmological Society, Atlantic City, June 16-17.
American Orthopedic Association, Atlantic City, June 16-17.
American Otological Society, Atlantic City, June 16-17.
American Pediatric Society, Atlantic City, June 16-18.
American Proctologic Society, Atlantic City, June 7-9.
American Psychopathological Association, Atlantic City, June 19.
American Society of Tropical Medicine, Atlantic City, June 16-17.
American Surgical Association, Atlantic City, June 16-18.
American Therapeutic Society, Atlantic City, June 6-7.
Arizona Medical Association, Globe, June 2-3.
Assn. of American Peroral Endoscopists, Brooklyn, June 5.
Assn. for the Study of Internal Secretions, Atlantic City, June 9.
Congress American Phys. & Surgs. of N. A., Atlantic City, June 16-17.
Maine Medical Association, Portland, June 18-19.
Massachusetts Medical Society, Boston, June 3-4.
National Assn. for Study of Epilepsy, Sonyea, N. Y., June 6-7.
National Tuberculosis Association, Atlantic City, June 12-14.
Nevada State Medical Association, Lake Tahoe, June 20-21.
New Jersey Medical Society, Spring Lake, June 24-25.
North Dakota State Medical Association, Grand Forks, June 24-25.
Rhode Island Medical Society, Providence, June 5.
Southern Minnesota Medical Assn., Rochester, June 23-24.
Western Roentgen Society, Cleveland, June 5-6.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Thirteenth Annual Meeting, held at Syracuse, May 6-8, 1919

(Concluded from page 1567)

Diagnostic Methods in Anemias

Dr. A. H. Sanford, Rochester: Besides the findings of the ordinary blood examinations, and the clinical history, the following methods are helpful in arriving at a diagnosis: (1) analysis of gastric contents by means of the Ewald test meal with subsequent radiographic examination of the stomach; (2) a careful neurologic examination and examination of the eyegrounds; (3) tests for fragility of the erythrocytes; (4) detection of evidences of blood destruction by determinations for urobilin and urobilinogen in the stool, or preferably in the duodenal contents (Schneider's method); (5) serologic tests for syphilis; (6) examination of stools for parasites; (7) inspection of the mouth, especially the tongue, and a thorough examination of the teeth and tonsils. The possibility of chronic sepsis originating here, and of foci of infection in other parts of the body should have general consideration.

Postoperative Shock Hemorrhage and Cardiac Dilatation

Dr. John Osborn Polak, Brooklyn: The preoperative index of a woman's cardiac strength is the pulse pressure. It makes no difference, so far as the operative prognosis is concerned, whether the systolic blood pressure is 105 or 160 mm. so long as the diastolic pressure is not within 30 mm. of the systolic. In other words, provided the metabolism is near the normal, the pulse pressure of the individual is the index of cardiac strength, no matter what her systolic blood pressure may be. The only exception is the very high pulse pressure in aortic regurgitation. The hemoglobin and leukocyte count are the next important factors for preoperative determination, and the blood coagulation time is also of considerable significance. These observations, together with kidney function tests, are made as a preoperative routine. This gives the woman her greatest margin of safety and affords the surgeon a basis for his differential diagnosis in postoperative conditions. There is a constant rise of from five to fifteen points in the hemoglobin readings following anesthesia with ether when such anesthesia occupies more than thirty minutes. Consequently, allowance must be made for this rise in using hemoglobin estimations as a diagnostic sign in internal bleeding. The erythrocyte count is also increased, but its variation from the preoperative count is very slight. In the majority of cases there is a moderate fall in both the systolic and diastolic blood pressure following ether anesthesia. The blood pressure returns to the preoperative reading in from twelve to forty-eight hours. The inhalation of oxygen after the withdrawal of the ether vapor diminishes this fall in blood pressure, but is only transient in its effect. In cases of shock, especially when much blood has been lost during the operation, the fall in blood pressure is greater than after long operation without blood loss, being from 10 to 50 mm. The pulse pressure is a better index of hemorrhage or cardiac failure than is the systolic pressure. There is a constant rise in the leukocyte count in hemorrhage, while the leukocyte count falls in shock.

The Doctor and the Changing Order

Dr. George B. Vincent, President of the Rochefeller Foundation: The medical profession should prepare to adapt itself to the changing social conditions. The doctor faces an entirely new situation from that of ten years ago. New knowledge and new discoveries have accumulated so rapidly that it is impossible for any one man to keep up with them. Specialism is the only solution. The physician is becoming less and less able independently to perform his work efficiently. The cooperative clinic is already being operated successfully. A maternity clinic in Boston is so conducted that the mother receives prenatal care, medical service at the time of the birth of the child and after-care, all for an inclusive fee. There are also the infant welfare, tuberculosis and venereal clinics.

As to health insurance, there is a possibility of developing some plan that will protect the industrial population against pauperism and social dependence and which will preserve its dignity and enable it to maintain its status in the democracy. It will be necessary to learn to conform ourselves to new social ideals in order to perform our function to society and to be a part of the common life.

Research and Clerical Work.—For the most part among us the great prizes go to the man who works up through clerical rather than through expert lines. We must find some way to change this. The path of science must lead to the top, and at the top must still be science. To achieve this ideal, the scientist must show generosity toward colleagues and subordinates, an enthusiastic recognition of their merit and an abnegation of self-aggrandizement, no less than skill in plan and energy in execution. It is essential also that he should develop methods for conserving time and strength by assigning clerical work to clerks instead of becoming a clerk himself, in order that he may keep mind and desk clear for the really important things.—Yandell Henderson: The Physiology of the Aviator, *Science*, May 9, 1919.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Obstetrics and Diseases of Women and Children, New York

May, 1919, **79**, No. 497

*Problem of the Cystocele. G. G. Ward, Jr., New York.—p. 15.
Gastropexy. Report of Cases. D. Bissell, New York.—p. 613.
*End Results of Resection of Fallopian Tubes. E. A. Bullard, New York.—p. 643.
Clinical Significance of Inertia Developing Late in Labor. P. T. Harper. Albany.—p. 649.
Pregnancy in a Case of Improved Sporadic Cretinism. W. E. Welz. Detroit.—p. 655.
Case of Multiple Fibromyomata of Broad Ligament, with Secondary Cystic Degeneration. O. McNeile, Los Angeles.—p. 657.
Recent Developments in Obstetrics. F. R. Oastler, New York.—p. 659.
Unsolved Problems in Gynecology. W. P. Graves, Boston.—p. 666.

Problem of the Cystocele.—In all cases of cystocele complicated with prolapsus uteri sufficient to have an associated retroversion, Ward believes that shortening of the uterosacral and round ligaments is necessary in addition to other procedures. He describes the technic which he has adopted. He combines the principles of several operations. His technic is a combination of the methods of Hadra, Goffe, Martin and Frank, Alexandroff and Sims, with the result of reducing the hernia, replacement of its supports by overcorrection, overcoming the excess of bladder base and vaginal wall both anteroposteriorly as well as transversely, with a restoration of the anterior invagination of the uterus. The operation is termed a cystopexy.

End Results of Resection of Fallopian Tubes.—Of forty-four patients whose cases were analyzed by Bullard, twenty-one have been entirely relieved of symptoms. Twenty cases have been total failures or only partially successful. Only three women have become pregnant.

American Journal of Roentgenology, New York

April, 1919, **6**, No. 4

Lung Abscess and Bronchiectasis: Clinical and Roentgenologic Study of One Hundred Cases. H. Wessler, New York.—p. 161.
Radiator Type of Tube. W. D. Coolidge, Schenectady.—p. 175.
Roentgen-Ray Evidence Related to Etiology of Carcinoma. C. L. Martin, Boston.—p. 180.
*Localization of Foreign Bodies at the Front. C. A. Waters.—p. 188.
Case Showing Air Within Cranial Cavity. R. J. May, Cleveland.—p. 190.
Esophago-Tracheal Fistula; Case Probably Due to Syphilis, Complicated with Pulsion Diverticulum. I. Gerber, Providence.—p. 191.

Localization of Foreign Bodies at the Front.—The "nearest point" method of localization described by Waters was used at the French Evacuation Hospital at Vasseny, France, near the Chemin-des-Dames. This is a palpation method, carried out under fluoroscopic observation, of the soft tissues in the region of the projectile. The palpation of the soft tissues is done with a wooden stick about 10 inches long with a metal screw or tack inserted into each end. This is known as the palpating or "joy" stick. Under the screen the nearly transparent wood can be seen only faintly, while the sharp contrasted shadow caused by the metal screws is plainly visible. The purpose of palpating the soft tissues with this instrument is to determine whether the foreign body can be moved, and how much. By exerting light and deep pressure on the soft tissues with the stick it is possible to determine with fair accuracy the depth at which the projectile lies under the point on the skin surface where the pressure is made. By holding one end of the stick against the skin surface and shifting the tube from side to side, the simple parallax method can be combined, which often helps a great deal in cases where the projectile is embedded in the bone or has entered the joint. Generally speaking a projectile, in the soft tissues, which yields movement by light pressure exerted on the palpating stick, would lie about 2 or 3 centimeters under the skin. If deep palpation is necessary in order to produce movement of the projectile, the projectile lies about 4 to 5 centimeters under the skin. The nearest point method is most applicable to localization of projectiles in the soft tissues of the extremities, the axilla and triangles of the neck, particularly, and also the scrotum and buttocks. In cases where foreign bodies are located in the cranium, chest and abdominal cavities, the nearest point method has its least use. However, in combination with the parallax method used in bones and joints, it will still give the most accurate and quickest evidence in the localization of the projectile.

Boston Medical and Surgical Journal

May 15, 1919, **180**, No. 20

Case of Back Strain Causing Acute Retention of Urine; Diagnosis and Treatment of Lesions of Lower Region of Spine. H. W. Marshall, Boston.—p. 14.
Flat Feet and Leg Muscle Strain, Related to Industry in Cause. D. V. Baker, Boston.—p. 554.
Postoperative Analgesia. B. Van Hoosen, Chicago.—p. 556.
Vasodilators in Intravenous Treatment of Syphilis with Arsphenamine. G. E. Barnes, Herkimer, N. Y.—p. 558.

California State Journal of Medicine, San Francisco

May, 1919, **17**, No. 5

Red Cross Welfare Work in Paris, France. T. Coffey, Los Angeles.—p. 137.
*Endocrine Glands and Their Relation to Vasomotor Disturbances of Air Passages. G. Selfridge, San Francisco.—p. 139.
Influenza Epidemic in S. A. T. C., Los Angeles. G. H. Kress, Los Angeles.—p. 146.

Endocrine Glands and Their Relation to Vasomotor Disturbances of Air Passages, Hay-Fever and Asthma.—Among the twenty-six cases of vasomotor rhinitis seen by Selfridge, fourteen were found with signs of slight endocrine gland insufficiencies. No study was made of the remaining cases to determine the possibility of gland insufficiency. Of fifty-two cases of asthma, twenty-two gave signs of endocrine disturbances, six thyroid predominating, fifteen hypopituitary, one probably status lymphaticus. Gland disturbances in the other thirty cases were not searched for.

Endocrinology, Los Angeles

Jan.-Mar., 1919, **3**, No. 9

*Corpus Luteum in Neurologic Practice. H. Climenko, New York.—p. 1.
*Testicular Hormone. H. Wheelon, St. Louis.—p. 16.
*Paroxysmal Nasal Hydrorrhea Due to Dysthyroidism of Syphilitic Origin. M. R. Castex, Buenos Aires.—p. 29.

Corpus Luteum in Neurologic Practice.—For purposes of control Climenko used corpus luteum in some male neurasthenic cases. It was also administered to patients suffering from organic nervous diseases, such as multiple sclerosis, and also in the early stages of dementia praecox. In all of these the drug was inert. Corpus luteum had no effect on the blood pressure of arteriosclerosis, neither in the male nor in the female. The best results were obtained in young females, poorer results in natural menopause and no results in surgical menopause. The hypodermic preparations did not give as good results as the drug given by mouth. Contrary to the Sajous statement, Climenko found that corpus luteum whenever efficient gives prompt results and large doses need not be employed. He found that 2 grains is as large a dose as one needs to use. Corpus luteum extract acts best when there is every reason to believe that the native corpus luteum is still present. The administration of the extract cannot replace the function of the native corpus luteum in pregnancy and probably also not in menstruation. When menstruation is discontinued by virtue of disturbance in the secretion of another gland, such as the pituitary, corpus luteum will not produce menstruation. Inasmuch as corpus luteum extract when effective produces almost always the same chain of phenomena, Climenko feels that it is reasonable to conclude that (*a*) corpus luteum has a specific action; (*b*) the administered extracts probably do not act as the native hormone; and (*c*) that the extract, in all probability, stimulates the native corpus luteum to function. The two contraindications to the use of corpus luteum are an abnormally low blood pressure and profuse and frequent menstruation.

Testicular Hormone.—That the proper development and functioning of the various organs of the body are dependent on the correlating action of the internal secretion of the interstitial cells is the conclusion reached by Wheelon on the basis of his own observations and a review of the literature. Its presence makes possible normal somatic differentiation. Structural and functional changes of tissues result in alterations of nervous activity, such alterations occurring partly because of somatic alterations and their attended functional changes and partly because of a direct influence on the nervous structure proper. However, it is wrong to assume that the internal secretion of the gonads alone is sufficient to establish and maintain sexual characters, because the influence of the adrenals, thyroid, hypophysis and thymus on the development and maintenance of sex and sex characters cannot be ignored. However, these glands are found well developed in the two sexes while but a single specific primary genital gland is found in each sex. The action of the gonad hormone in the presence of normal endocrine glands and somatoplasm is necessary, therefore, to the development of true sex types.

Nasal Hydrorrhea.—No case similar to the one described by him has been found by Castex in the literature. A woman, aged 40, began to have outbreaks of rhinorrhea in paroxysmal form when about 28 years of age. The attacks occurred at relatively long intervals in the first years, but slowly and progressively became more frequent and acute. The patient was seized at any hour of the day or night, although there was a predilection for the morning and the evening. The attacks began with a sensation as of a sudden cold, with sneezing, followed by an abundant flow of albuminous liquid which lasted between half an hour and an hour. Topical applications, general treatments, dietetic and climatic therapeutics gave not the slightest relief, the attacks on the contrary becoming progressively more acute and frequent, until from one daily they reached in the last two years two or three crises per day lasting progressively longer, up to two and three hours each time. The intensity of the flow also increased and necessitated an average of fifty men's handkerchiefs for each attack. Exploration by Maranon's maneuver disclosed that she had a goiter, distinct, soft, scarcely perceptible to the touch at the level of the isthmus and left lobe, evident at the level of the right lobe, and still more evident throughout the gland.

Treatment was begun with thyroid preparations, and within a few days a favorable effect on the paroxysms of hydrorrhea was apparent. Thereafter the thyroid treatment was intensified. The hydrorrheic attacks became much less, but at the same time the phenomena of hyperthyroidism made their appearance, and their exacerbation was such that the treatment had to be interrupted. Close examination of the patient disclosed a slight anisodischorea and a soft systolic bruit in the aorta. These two elements, suggested the probability of the syphilitic origin of the dysthyroidism—especially since the husband of the patient had formerly had syphilis, treated deficiently, and most of the children showed a taint of hereditary dystrophic syphilis. A mixed antisyphilitic treatment was started, having recourse to the administration of iodin through the alimentary canal, and mercury, through intramuscular injections of 0.02 cgm. of biniodid per day for a month. At the end of a month's treatment, the attacks had almost entirely vanished, threatening only from time to time. The patient was allowed a rest from treatment for three months. The attacks were renewed during the third month. The mercurial treatment was resumed and kept up for three months. At the end of the first month the crises vanished and did not return either during the last two months of mercurial treatment or during the two months rest which have since elapsed.

Florida Medical Association Journal, St. Augustine and Jacksonville

April, 1919, 5, No. 10

Eye Symptoms as Aid in General Diagnosis. E. R. Tuttle, Miami. —p. 177.
Psychology in Practice of Medicine. J. G. DuPuis, Lemon City, Fla. —p. 181.
The Visiting Nurse. C. L. Paine.

Illinois Medical Journal, Chicago

March, 1919, 35, No. 3

How to Study a Heart Case and How to Treat it. C. T. Hood, Chicago.—p. 113. To be continued.
Tertiary Syphilis of Nose and Throat. S. Salinger, Chicago.—p. 126.
Shall we Develop Custody or Research for Cure and Prevention? One Cent for Research on Every Dollar for Custody. B. Holmes, Chicago.—p. 128.
Trachoma. C. Loeb, Chicago.—p. 133.
Tonsillar Hemorrhage. C. F. Yerger, Chicago.—p. 142.
Abdominal Pain. G. W. Green, Chicago.—p. 145.

April, 1919, 35, No. 4

Is It Worth While to Study the Insanities by the Scientific Method? One Cent for Research for Every Dollar for Confinement. B. Holmes, Chicago.—p. 169.
Hypertrophic Periostitis with Subsequent Decalcification of Skull Areas. C. C. Rogers, Chicago.—p. 173.
Imperforations of Rectum and Anus. Treatment. J. R. Pennington, Chicago.—p. 176.
How to Study a Heart Case and How to Treat It. C. T. Hood, Chicago.—p. 179.
Public Health Administration in Illinois Under the New Civil Administrative Code. C. St. C. Drake, Springfield.—p. 183.
Case of Artificial Pneumothorax of Four Years Standing; Broncho-Pneumo-Necropsy. E. A. Gray, Chicago.—p. 188.
Hyperthyroidism. S. Kuh, Chicago.—p. 190.
Conditions Arising in Recent Influenza Epidemic which Simulated Acute Abdomen. R. W. McNealy, Great Lakes.—p. 192.
Use and Abuse of Pituitrin. A. E. Blount, Oak Park.—p. 194.
Syphilis of Rectum and Anus. C. J. Drueck, Chicago.—p. 197.

Journal of Bacteriology, Baltimore

March, 1919, 4, No. 2

Agglutination. R. E. Buchanan, Ames, Ia.—p. 73.
Methods of Pure Culture Study; Committee Report. H. J. Conn, H. A. Harding, I. J. Kligler, W. D. Frost, M. J. Prucha and K. N. Atkins.—p. 107.
Bacterial Variations Induced by Changes in Composition of Culture Media. A. I. Dawson.—p. 133.
*Value of Cooked Meat Medium for Routine and Special Bacteriology. W. L. Holman, Pittsburgh.—p. 149.
Delayed Development of Colonies on Plates Seeded from Disinfected Sewage. W. S. Sturges, Jr., New Haven.—p. 157.
Methods for Isolation and Cultivation of Bacillus Putrificus and other Obligate Anaerobes. W. S. Sturges, Jr., and L. F. Rettger, New Haven.—p. 171.
Some Halophilic Bacteria. E. LeFevre and L. Round, Washington, D. C.—p. 177.
*Yeast Autolysate as Culture Medium for Bacteria. I. J. Kligler, New York.—p. 183.

Value of Cooked Meat Medium for Bacteria Study.—Holman contends that the cooked meat medium is the most useful medium for obtaining growth of both anaerobic and aerobic bacteria, for storing mixed cultures for later isolation as well as pure cultures for further investigations. It is a medium simply made which can be sterilized readily, and owing to its high buffer character is adaptable to the growth of a great variety of bacteria.

Yeast Autolysate as a Culture Medium for Bacteria.—Experiments made by Kligler, indicate that yeast permitted to undergo autolysis may serve as a cheap substitute for more expensive animal proteins or their digestioin products. The autolysate contains a high percentage of amino nitrogen and a relatively small amount of the higher nitrogen complexes. The fact that some bacteria, notably pneumococcus, meningococcus, etc., do not thrive as well in the yeast broth as they do in beef infusion media, would indicate that the higher nitrogen complexes—polypeptides, etc.—play some part in bacterial nutrition. On the whole, however, it seems that the yeast autolysate media are entirely satisfactory for the cultivation of the less delicate pathogenic bacteria. Endo and brilliant green plates made with this medium give entirely satisfactory results.

Journal of Biological Chemistry, Baltimore

May, 1919, 38, No. 1

Metabolism of Furan and Hydrofuran Derivatives in Animal Organism. N. Suzuki, Kyoto Imperial University.—p. 1.
Behavior of Cinnamic Acid and its Derivatives in Animal Body. II. Ando, Kyoto Imperial University.—p. 7.
Biologic Observations on Formation of Phenol. M. Tsudji, Kyoto Imperial University.—p. 13.

*Physiology of Endogenous Uric Acid. H. F. Höst, University of Christiania and University of Copenhagen.—p. 17.
*Behavior of Inulin in Animal Body. Application of Benedict Method to Estimation of Levulose and Inulin. R. Okey, Urbana, Ill.—p. 33.
*Digestibility of Bacon. K. Blunt and M. G. Mallon, Chicago.—p. 43.
Colorimetric Determination of Hydrogen Ion Concentration in Small Quantities of Solution. A. R. C. Haas, Madison, Wis.—p. 49.
*Rapid Method for Estimation of Urea in Urine. J. B. Sumner, Ithaca, N. Y.—p. 57.
Lysine as a Hydrolytic Product of Hordein. C. O. Johns and A. J. Finks, Washington, D. C.—p. 63.
Gas Tensions in Tissues of Mouth. Y. Henderson, New Haven, and R. L. Stehle, Philadelphia.—p. 67.
*Gas Tensions of Abdominal Cavity, with Evidence on Diffusion of Gases within Body. H. W. Haggard and Y. Henderson, New Haven.—p. 71.
*System of Blood Analysis. O. Folin and H. Wu, Boston.—p. 81.
Determination of Urea in Urine by Direct Nesslerization. O. Folin and G. E. Youngburg, Boston.—p. 111.
Biologic Analysis of Pellagra-Producing Diets. E. V. McCollum, N. Simmonds and H. T. Parsons, Baltimore.—p. 113.
*Is Lactalbumin a Complete Protein for Growth? A. D. Emmett and G. O. Luros, Detroit.—p. 147.
Relative Abundance of Serum Proteins in Albino Rats at Different Ages. I. Toyama, Philadelphia.—p. 161.
*Acidosis: XIII. Method for Titrating the Bicarbonate Content of Plasma. D. D. Van Slyke, E. Stillman and G. E. Cullen. New York.—p. 167.
Effect of Hydrogen Ion Concentration on Liquefaction of Gelatin. H. E. Patten and A. J. Johnson, Washington, D. C.—p. 179.

Physiology of Endogenous Uric Acid.—The uric acid output of two normal individuals and fifteen other subjects who were convalescents and patients was studied by Höst. In none of the seventeen subjects was the uric acid output for twenty-four hours constant. But with a fixed diet and under similar conditions the uric acid output in a few subjects was constant, while in the majority of those examined it was extremely irregular and showed variations from day to day up to 80 per cent. But even in the individuals whose output of uric acid was most regular, the output was dependent on several factors, of which variations in the diet are the most important. In every increase or decrease of the caloric value of the food beyond a certain minimum, the uric acid output was always changed in the same direction. This took place whether the caloric value was varied by means of protein, fat or carbohydrate; the change in the uric acid output was, however, greater when the amount of calories was varied by means of protein rather than by nitrogen-free food elements. With a constant food caloric value the uric acid output depended to a certain extent on the food protein, so that a change in the latter beyond a certain minimum always produced a corresponding change in the uric acid output. The excretion of nitrogen and the hydrogen ion concentration of the urine were without influence on the endogenous uric acid output. On the other hand, increase of body temperature produced a considerable increase in the uric acid output. The endogenous uric acid output in twenty-four hours varied between 0.27 and 0.99 gm.; the last value is obtained in a normal person on an extensive bread diet. The amount of the endogenous uric acid in the blood varied to a great extent, the minimum being less than 0.50 gm., the maximum being 2.68 gm. per hundred c.c of blood, but is constant in the case of each individual within the limit of error of the method (10 per cent.). In 70 per cent. of the subjects the uric acid concentration is between 0.01 and 0.02 gm. per hundred c.c. of blood.

Inulin in Animal Body.—Benedict's modification of the Lewis-Benedict method was used successfully by Okey for the determination of levulose, and of levulose in the presence of inulin.

Digestibility of Bacon.—A very careful study was made by Blunt and Mallon as to the digestibility of bacon. The coefficient of digestibility of much and slightly cooked bacon fat was found to average 96.7 per cent., approximately the same as that for other soft fat and much higher than the 82.6 per cent. reported by Rubner for bacon eaten in large pieces (raw?). The nitrogen also was as well digested as that of other meat.

Rapid Method for Estimation of Urea in Urine.—The method described by Sumner consists in treating a small quantity of urine (1 c.c.) in a centrifuge tube with an approximately neutral phosphate solution and with urease. After the urea has been decomposed a protein precipitant is added, the tube centrifuged, and an aliquot of the clear supernatant liquid is Nesslerized and compared with a standard.

Gas Tensions of Abdominal Cavity.—The contribution made by Haggard and Henderson consists in the demonstration that the CO_2 tension of the abdominal air soon becomes equivalent to that of the pulmonary alveolar air and of the arterial blood, and that under abnormal conditions (experimental acidosis) in which it is not easy or safe to cause the rebreathing necessary to obtain an alveolar sample, the CO_2 tension in the abdominal air falls in close correspondence to the arterial CO_2 tension. Diffusion of oxygen through the tissues is much slower than in that of CO_2. The tension of oxygen in the abdominal air at equilibrium is about 45 mm. of mercury, much below that of either the arterial or venous blood and corresponding therefore probably to that of the tissues. When the air breathed contains carbon monoxid this gas appears in the abdominal air. The tension of ether vapor in the abdominal air during anesthesia is 29 mm. mercury.

System of Blood Analysis.—The main purpose of the research recorded by Folin and Wu has been to combine a number of different analytical procedures into a compact system of blood analysis, the starting point for which should be a protein free blood filtrate suitable for the largest possible number of different determinations.

Lactalbumin a Complete Protein for Growth.—Emmett and Luros claim that lactalbumin is a complete protein in the sense that it does not lack any of the nitrogenous cleavage products essential for growth. It can supplement a deficient growth-promoting protein (corn gluten) and, incorporated as the sole protein in a ration containing lactose, it produces a normal rate of growth when present to the extent of only 10 per cent.

Studies of Acidosis.—The bicarbonate content of serum or oxalate plasma is determined by Van Slyke and his associates by adding an excess of standard acid (5 c.c. of 0.02 NHCl to 2 c.c. of plasma), removing the carbon dioxid by rotating the solution for one minute about the wall of a flask, and titrating back with 0.02 NNaOH to the original hydrogen ion concentration of blood (p_{H^+} 7.4) with neutral red as indicator.

Journal of General Physiology, Baltimore

May 20, 1919, **1**, No. 5

Selective Action of Nicotine on Central Nervous System of Squid, Loligo Pealii. A. R. Moore, Woods Hole, Mass.—p. 505.
*Experimental Production of Edema by Nephrectomy. W. W. Swingle, Princeton, N. J.—p. 509.
Antagonism Between Alkaloids and Salts in Relation to Permeability. W. J. V. Osterhout, Cambridge, Mass.—p. 515.
New Apparatus for Measuring Surface Tension. P. Lecomte du Nouy, New York.—p. 521.
Relation Between Metamorphosis and Other Developmental Phenomena in Amphibians. E. Uhlenhuth, New York.—p. 525.
Sensory Equilibrium and Dark Adaptation in Mya Arenaria. S. Hecht, Omaha.—p. 545.
Amphoteric Colloids, V. Influence of Valency of Anions Physical Properties of Gelatin. J. Loeb, New York.—p. 559.

Experimental Production of Edema by Nephrectomy.—The extirpation experiments recorded by Swingle show that any malfunctioning of the kidney, any block in its excretory canals, or complete loss of function, as for instance in nephrectomy, leads to an excessive accumulation of fluids in the lymph sinuses, tissues, and body cavity.

Journal of Industrial Hygiene, New York

May, 1919, **1**, No. 1

Industrial Medicine and Surgery; Development and Scope. H. E. Mock, Chicago.—p. 1.
Lead Poisoning in American Industry. A. Hamilton, Boston.—p. 8.
*Problem of Fatigue. R. A. Spaeth, Baltimore.—p. 22.
*Telephone Operating: Study of Its Medical Aspects with Statistics of Sickness Disability Reports. A. G. Richardson, Boston.—p. 54.

Problem of Fatigue.—The term "industrial fatigue" is at present loosely applied either to the daily and weekly weariness resulting from industrial work or to the condition of accumulating fatigue which merges insensibly with psychoneuroses. It would seem more logical to Spaeth to restrict the term industrial fatigue to the former more popular meaning and designate the gradually accumulating fatigue in overdriven industrial workers as industrial psychoneurosis. A very extensive bibliography is appended to this article.

Medical Aspects of Telephone Operating.—This paper is based on nine years of service as industrial physician for a telephone company. Richardson discusses the effects of the work on the different parts of the body which may be subject to strain in telephone operating.

Laryngoscope, St. Louis

April, 1919, **29**, No. 4

Index-Medicus and Digest of Oto-Laryngology for 1918.

Medical Record, New York

May 10, 1919, **95**, No. 19

Evolution of Thoracic Surgery Within Past Fourteen Years. W. Meyer, New York.—p. 761.
Postoperative Thoracic Drainage. W. Meyer, New York.—p. 773.
Venereal Sore Peril. A. Strachstein, New York.—p. 775.
*Pathology of Epidemic Pneumonia in Camps and Cantonments in 1918. W. G. MacCallum, Baltimore.—p. 776.

May 17, 1919, **95**, No. 20

Memory; (The Mnemologic Phenomena) Relation to Intelligence, Pedagogics and Psychopathy. J. V. Haberman, New York.—p. 807.
Treatment of Fever. B. Robinson, New York—p. 818.
Perisinus and Epidural Mastoid Abscess Subsequent to Influenza. Report of Five Cases. H. P. Blackwell, New York.—p. 819.
Case of Violent Reaction Following Antigonicoccus Vaccine. L. F. Herz. New York.—p. 820.
Rehabilitation in Canada. J. L. Biggar, Ottawa, Can.—p. 821.
Functional Reeducation of British Soldier. R. T. McKenzie, U. S. Army.—p. 827.
Functional Reeducation of French and American Soldier. W. G. Thompson, New York.—p. 829.

Pathology of Epidemic Pneumonia in Camps and Cantonments in 1918.—The forms of pneumonia caused by each organism and the modifications which result from the nature of the predisposing disease, the virulence of the bacteria, the resistance of the infected person and other less tangible factors are described by MacCallum. He emphasizes that the anatomic changes produced by this disease have not been seen by any one: at least they have not been recognized clearly, but every one has realized that the disease produced an extraordinary depression or lowering of the ordinary powers of resistance so that these persons were intensely predisposed to the invasion of any pathogenic bacteria which happened to prevail in their mouths and throats. Pneumonia, therefore, often followed immediately, and all who died showed the pneumonic changes in their lungs, changes which were exceptionally severe and rapidly fatal, on account of the unparalleled spread of the bacteria in the unresisting tissues. But the type of pneumonia was different according to the organism which happened to invade, and it was possible to recognize pneumococcal, streptococcal and staphylococcal forms of confluent lobular pneumonia and to distinguish them from each other and from the interstitial form caused by the bacillus of Pfeiffer. MacCallum says that stress must be laid on the epidemic character of the secondary invasion, which made it appear that in one camp nearly every case was a pneumococcal pneumonia, while in another almost every case was due to the influenza bacillus. It is not surprising that with the one-sided view obtained at first by those who observed these cases in one hospital only, there should have been announced the conviction that the bacillus of Pfeiffer was the cause of the primary disease as well as of the pneumonia. But broader experience has shown, it seems, that this prevalence of the influenza bacillus in some camps, as in those of the New England States, represented a local condition. In other places, pneumococci and streptococci were the opportune invaders, and we are still quite ignorant of the cause of the primary disease.

Michigan State Medical Society Journal, Grand Rapids

May, 1919, **18**, No. 5

Victory Number.

New York Medical Journal, New York City

May 17, 1919, **109**, No. 20

Lethargic Encephalitis. A. Gordon, Philadelphia.—p. 837.
Dominance of the Endocrines. W. V. P. Garretson, New York.—p. 839.
Maloney Method of Reeducation in Treatment of Chorea. M. Grossman, New York.—p. 842.
Physical Condition of Men of New York State Between Twenty-one and Thirty-one. I. W. Brewer, Watertown, N. Y.—p. 845.
Health Question of Man Next Door. A. B. Jackson, Philadelphia.—p. 847.
Postural Treatment of Proctocolitis, Based on Anatomy of Large Intestine. A. A. Landsman, New York.—p. 854.
Clinical Similarity Between Influenza Epidemic and Plague. A. Young, Hamburg, Pa.—p. 856.
An Anecdote of Sir Astley Cooper. W. R. Riddell, Toronto.—p. 857.
Prophylaxis and Treatment of Influenza. L. T. De M. Sajous, Philadelphia.—p. 858.

Oklahoma State Medical Assn. Journal, Muskogee

May, 1919, **12**, No. 5

Focal Infection in Relation to Diseases of Eye. T. W. Stallings, Tulsa.—p. 111.
Metastatic Infection. R. Grosshart, Tulsa.—p. 115.
Focal Infection. A. W. Figford, Tulsa.—p. 117.
*Tuberculosis in Children with Special Reference to Tracheobronchial Glands. L. J. Moorman, Oklahoma City.—p. 123.
Case Records. F. S. Clinton, Tulsa.—p. 129.

Tuberculosis in Children.—At the Oklahoma City Tuberculosis Dispensary 135 children were examined during 1918. Of these, 50 gave a history of exposure to open cases, 70 were exposed to suspected cases and 15 gave no history of exposure. One hundred and sixteen gave a history of measles, 50 had pneumonia, 34 had influenza and 86 gave a history of whooping cough. A history of the following symptoms was obtained: cough in 59 cases; expectoration in 29; pain in the chest in 24; pleurisy in fourteen; hemoptysis in 2; night sweats in 11; loss of flesh in 25; loss of strength in 34; hoarseness in 17; fever in 19; loss of appetite in 28; disturbed digestion in 27. Physical examination revealed the following: weight below standard, 73; height below standard, 17; general appearance good in 95, fair in 48, poor in 21. Type of chest normal in 121, abnormal in 14; superficial lymph nodes palpable in 110 (some were not reported); tonsils hypertrophied in 80, dulness elicited by percussion in 89 (with few exceptions the dulness was interscapular); D'Espine's sign was present in 35; râles in 29. Sixty-nine were examined roentgenographically and the roentgenogram showed tuberculosis of the tracheobronchial glands alone in 11 cases; tuberculosis of the tracheobronchial glands with peribronchial thickening in 29; tuberculosis of the tracheobronchial glands and peribronchial thickening, with involvement of the lung tissue in 19; nontuberculosis infection in 3. The diagnosis as recorded in the 135 cases was: tuberculosis of the hilus alone in 34; tuberculosis of the hilus with peribronchial and lung involvement in 44; doubtful, 40; cases with nontuberculous infection, 5; negative, 12.

United States Naval Medical Bulletin

April, 1919, **13**, No. 2

Pathology of Pneumonia Accompanying Influenza. E. W. Goodpasture, F. L. Burnett, U. S. N. R. F.—p. 177.
New War Methods in Amputations, Stumps and Prosthesis of Lower Limbs. R. G. LeConte, U. S. N. R. F.—p. 244.
Education and Sanitation Aboard Ship. W. S. Pugh, U. S. Navy.—p. 254.
Sanitary Drinking Fountain. D. S. Hillis, U. S. N. R. F.—p. 287.
Clinical Chart Made by a Rubber Stamp. J. J. Cancelmo, U. S. N. R. F.—p. 287.
System of Clinical Records. W. B. Grove, U. S. N. R. F.—p. 289.
Dressing for Wounds. C. W. C. Bunker, U. S. Navy.—p. 291.
Extensive Abdominal Wounds from a Hand Grenade. J. M. Emmett.—p. 293.
Case of Fracture of Intercondylar Spine of Tibia. G. G. Ross, U. S. N. R. F.—p. 294.
Case of Fracture of Pelvis. G. G. Ross, U. S. N. R. F.—p. 295.
Chronic Articular Rheumatism Cured by Removal of Diseased Appendix. R. H. Michels.—p. 296.
Case of Myeloid Leukemia. E. R. Rayn, U. S. Navy.—p. 297.
Pericardiotomy. L. R. G. Crandon, U. S. N. R. F.—p. 299.
Case of Keratosis Plantaris. J. M Perret, U. S. Navy.—p. 300.

Case of Influenza with Unusual Complications. F. G. Folken, U. S. Navy.—p. 301.
Removal of Wounded Men from U. S. S. Northern Pacific to U. S. S. Solace, January 3 and 4, 1919. E. H. H. Old, U. S. Navy. —p. 349.
Medical Department on Board a Torpedoed Transport. E. E. Curtis, U. S. Navy.—p. 351.
Influenza at U. S. Navy Hospital, Washington, D. C. R. M. Kennedy, U. S. Navy.—p 355.
Post-Influenzal Pneumonia at U. S. Navy Hospital No. 4, Queenstown, Ireland. A. M. Burgess, U. S. Navy.—p. 356.
Epidemiologic Study of Diphtheria at U. S. Naval Academy. J. E. Houghton, U. S. Navy.—p. 359.
Study of Epidemic of Influenza at Pensacola. J. M. Perret, U. S. Navy.—p. 365.
Training Schools for Nurses in Haiti. L. D. Jordan, U. S. Navy.—p. 378.
Observations on Two Hundred Men Examined for Candidates for Listeners School. F. B. Galbraith, U. S. Navy.—p. 380.

West Virginia Medical Journal, Huntington

January, 1919, **12**, No. 7

Sanitary Management of Common Infections. S. L. Jepson, Charleston.—p. 245.
Medical Science and World War. A. Arkin, Morgantown.—p. 250. To be continued.
When You Have the "Flu." M. C. Kyle, Charleston.—p. 254.
Bureau of Venereal Diseases. F. F. Farnsworth, Charleston.—p. 255.
Pertussis Vaccine; Report of Cases. J. L. Miller, Thomas.—257.

February, 1919, **12**, No. 8

Medical Stewardship and Medical Therapy. R. A. Ashworth, Moundsworth.—p. 281.
Focal Points of Infection Producing Toxemia. H. H. Roberts, White Sulphur Springs.—p. 287.
Medical Science and World War. A. Arkin, Morgantown.—p. 295.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Tuberculosis, London

April, 1919, **13**, No. 2

Care of Advanced Consumptive. R. D. Powell and Others.—p. 4.
Care of Advanced Consumptive with Laryngeal Complications. H. Tilley.—p. 72.
*Bilateral Maximum Blood Pressure in Pulmonary Tuberculosis. R. J. Cyriax.—p. 73.
*National Scheme for Prevention and Treatment of Tuberculosis. H. G. Sutherland.—p. 77.

Bilateral Maximum Blood Pressure in Pulmonary Tuberculosis.—One hundred and sixty bilateral readings were taken by Cyriax from twelve patients hospitalized because of tuberculosis. Tubercle bacilli had been found in the sputum of every case; six patients had unilateral, and six bilateral disease; ninety-eight observations were made on the former, and sixty-two on the latter. The readings were taken with a Riva Rocci apparatus by the method of auscultation, the maximum pressures being checked in addition by palpation of the pulse. As a general rule the first reading was taken from each arm alternately. The vast majority of observations were made while the patients were actually in bed. Purely for the sake of convenience in description, the term "lesion pressure" has been adopted by Cyriax to denote the maximum pressure in the brachial artery of the arm on the diseased side, the term "standard pressure" to denote the corresponding pressure on the healthy side. Forty-seven of the ninety-eight observations made in unilateral cases of disease revealed differences of more than 5 mm. between these two pressures. In patients suffering from an acute spread of the disease, stained sputum or hemoptysis, the lesion pressure was found, as a rule, to be higher than the standard pressure, the difference between them amounting in some cases to 26 mm. This rise in the lesion pressure appeared to be solely an index of an acute process, and was not always associated with pyrexia; in some cases of stained sputum, it preceded the actual staining by some days. Subsequently, as the more acute stage passed off, or staining ceased, the lesion pressure was noticed to fall below the standard pressure. But the latter usually rose at the same time, and hence, when the observations were recorded graphically, the curves representing the two pressures were seen to cross. A rise in the lesion pressure above the standard pressure has thus been found, as a rule, to be an accompaniment of symptoms of activity; a fall, on the other hand, to be of favorable import. Thirty-five of the sixty-two observations made in bilateral cases of disease revealed differences of more than 5 mm. between the maximum pressures in the two arms. But the results were not very satisfactory probably because in cases of bilateral mischief both pressures were "lesion pressured," and changes in one were therefore apt to be marked by changes in the other. Nevertheless, the pressure variations were found to correspond fairly closely with those found in unilateral cases.

National Scheme for Prevention and Treatment of Tuberculosis.—At a conference called by the Tuberculosis Society of the United Kingdom in January, 1919, certain resolutions were adopted: That a special department of the ministry of health in each country be created for the prevention and treatment of tuberculosis. The department of tuberculosis thus constituted would be responsible for general administrative measures against tuberculosis throughout the countries concerned; for statistics relating to the disease; to suggest, advise, direct, and if necessary finance schemes of after-care and employment of tuberculous patients; to direct, to finance, and to supervise an educational program by means of lectures, traveling exhibitions, appropriate cinema films, and by any other means; to direct and to finance research work in relation to the disease; to study housing and conditions of work in relation to the incidence of tuberculosis, and to promote legislation dealing with this matter; deputy commissioners of tuberculosis appointed by the crown work under the direction of the commissioners. Tuberculosis officers should be appointed throughout the kingdom.

British Medical Journal, London

April 26, 1919, **2**, No. 3043

Practical Importance of Vitamines. G. Hopkins.—p. 507.
*Ten Thousand Recruits with Doubtful Heart Conditions. S. R. Wells. —p. 510. To be concluded.
Plea for Homogenous Nerve Graft. E. W. Fisher.—p. 514.
Hyperpyrexial Heatstroke. K. G. Hearne.—p. 516.
Stock Vaccine in Pneumonia. W. F. Haultain.—p. 517.
Health Resorts and the States. C. W. Buckley.—p. 517.

Doubtful Heart Conditions in Recruits.—Out of the 10,000 recruits examined, 307 were considered to be definite examples of aortic regurgitation. In many cases there was reason to believe that other lesions were present as well. In ninety-four cases only the aortic lesion was present; in fourteen cases aortic stenosis was associated with it; in 112 cases, both aortic and mitral regurgitation were present, and in thirty-three cases, aortic and mitral regurgitation and mitral stenosis existed. One hundred and sixty-two men gave a history of rheumatic fever and symptoms of aortic regurgitation, 145 aortic regurgitants gave no history of rheumatic fever, while 1,759 men had a history of rheumatic fever but no evidence of aortic regurgitation, and 7,934 gave no signs or history of either. Fifty-five gave a history of rheumatism, and twenty stated that they had had chorea. Sixty-six men gave a history of tonsillitis. Seventy-one gave a history of scarlet fever. Twenty-two gave a history of diphtheria. The proportion giving a history of pneumonia is not large; twenty men had had pneumonia and 142 gave a history of one or more attacks of influenza.

May 3, 1919, **2**, No. 3044

Disappointments after Gastroenterostomy. R. Hutchison.—p. 535.
Cerebrospinal Fever. H. Rolleston.—p. 636.
How to Read Statistics. A. S. Percival.—p. 540.
Pathogenesis of Deficiency Diseases; Pellagra. P. Rondoni.—p. 542.
*Doubtful Heart Conditions. S. R. Wells.—p. 544.

Doubtful Heart Conditions in Recruits.—The conclusion of this investigation leads Wells to believe that two important causes of aortic regurgitation in the cases we have investigated—that is to say, men between the ages of 18 and 41—were rheumatic fever and strain. The investigators were unable to find any definite correlation in these cases between syphilis, tonsillitis, scarlet fever, diphtheria, pneumonia, gonorrhea, or growing pains, and the evidence is against influenza. With regard to chorea, there is a suggestion in some of the results that it may be a cause, but the number of cases investigated was so small, and the proportion of them giving a history of rheumatic fever as well so large, that caution must be exercised in drawing deductions. With regard to a history of "rheumatism," there is some evidence for assuming that in a certain proportion of these cases, but not all, an affection of the same nature as true rheumatic fever was referred to.

Lancet, London

April 19, 1919, **2**, No. 4990

Cerebrospinal Fever: A Review. H. Rolleston.—p. 25.
*Filarial Infection in Macedonia. J. G. Forbes.—p. 654.
Study of Epidemic "Spanish Influenza." E. Folley.—p. 656.
*Gas Gangrene, Due to Infection with Bacillus Tumefaciens. W. J. Wilson.—p. 657.

Filarial Infection in Macedonia.—Forbes reports two cases of *Filaria conjunctivae* (Addario) in man, with the first recorded discovery of the male worm. Records of six examples of human infection exist and in every case the solitary female worm, usually immature, only has been found. The two patients, one of whom had had 18 months' service in Macedonia, had not previously been out of England; the other a Serbian, came under treatment at the same general hospital attached to the Royal Serbian army. The male worm was found accidently in a lump, the size of a filbert nut, on the outer side of the upper part of the left forearm, which had been intermittently swollen for the previous two months. The nodule from which the worm had been removed was examined in the fresh state, but failed to show the presence of a second or female worm or evidence of microfilariae in the wall of the cystic interior. Examinations of the patient's blood were made on several occasions, both by day and night in fresh and stained films, but failed to show the presence of any microfilariae and gave no evidence of leukocytosis. The second patient had a tumor on the right side of the nose, which had given rise to inflammatory swelling of the face below the orbit for the previous two months. At operation a small cyst was removed and found to contain opaque glairy fluid and a delicate filiform worm. Blood film examinations of the patient on two separate occasions failed to show any microfilariae.

Gas Gangrene Due to Infection with Bacillus Tumefaciens.—A new pathogenic anaerobe was isolated by Wilson from a case of gas gangrene. Animal experiments confirmed the identity of the organism. The *B. tumefaciens* is an actively motile gram-positive bacillus. In morphologic characters it resembles the *Vibrion septique*, but it is easier to cultivate and forms spores, especially in carbohydrate media, with the utmost facility. It is essentially a saccharolytic bacillus and fails to digest either coagulated egg albumin or serum. In litmus milk it produces acid and gas. The clotted casein is not digested and remains red in color, i. e., there is no bleaching. Spores were found in the milk culture. The deep colonies in 0.1 per cent. glucose agar resemble those of the *V. septique*. In fermenting saccharose, inulin, and glycerine it resembles some strains of *B. welchii* and differs from *V. septique*, but resembles the latter in fermenting salicin. It is far more active in its action on sugars than the two strains of *B. oedematiens* with which Wilson compared it. In meat broth culture the fragments of muscle become pink in color and no digestion occurs. It hemolyses red blood cells.

April 26, 1919, **2**, No. 4991

*Influenza Epidemic. W. Russell.—p. 689.
*Experimental Studies with Small Doses of Roentgen Rays. S. Russ, H. Chambers, G. Scott, J. C. Mottram.—p. 692.
*Psychology of Internment. A. L. Vischer.—p. 696.
Gunshot Wounds and Other Affections of Chest. C. MacMahon.—p. 697.

Vaccine Treatment of Influenza.—The vaccine used by Russell was that manufactured by the Edinburgh Royal College of Physicians' Laboratory. There was no ill effect from its use, in fact, it seemed that the patient's general condition improved, that the intoxication seemed to be lessened or restrained. No patient has died to whom the vaccine has been given. Russell believes that in capable hands vaccine therapy seems to be the most promising line of treatment, if adopted as soon as definite respiratory signs appear, and if pushed with judgment.

Experimental Studies with Small Doses of Roentgen Rays.—Experimental facts as to the effects of small doses of roentgen rays on the blood of rats and on the susceptibility of these animals to tumor implantation (Jensen's rat sarcoma) are recorded by Russ and others. An attempt is made to show the possible bearing of the salient features of these newly acquired facts on the present day treatment of malignant disease by means of roentgen rays. Two suggestions are put forward in this connection. When a therapeutic dose is given to the cells of a tumor the rest of the body receives a fractional dose of the rays. It is submitted that the action of these rays, especially on the lymphocytes in the circulation, may be deterrent to the combative forces which the patient can normally bring to bear against the tumor growth. In the second place the possibility of increasing the resisting powers of the system by means of small doses of roentgen rays is shown to have an experimental basis.

Psychology of Internment.—Careful observations of prisoners of war in Switzerland, lead Bing and Vischer to describe a very characteristic psychoneurosis to which has been given the symbolical title of "psychose due fil de der barbelé," in German "Stacheldrahtkrankheit" and in English "barbed wire disease." This name seems to have originated in Switzerland, though its exact origin cannot be certainly determined; it has established itself so thoroughly that already it is to be found in international treaties. The symptoms of a neurasthenia *sui generis* are recognizable in most of those who have lived for more than six months behind the barbed wire fencing, and which in about 10 per cent. of all prisoners reach a high level of intensity. The first sign to appear is an increase of irritability. There is a great deal of quarreling. The power of concentration is greatly diminished. The prisoners complain with striking constancy that they lose their memory of people and of places, in so far as these relate to prewar events. Among the secondary symptoms are insomnia. Some prisoners complain of diminished vision. Many of them grow very suspicious. All have a marked tendency toward pessimism, and see every incident of their daily life in the gloomiest light; the worst cases often go for three or four days without speaking a word, plunged in a kind of torpor. Sexual impotence is very common. All these symptoms, once they are established, generally remain stationary, and rarely diminish so long as the internment lasts. Disturbances of memory, especially amnesia, are very marked. See also abstract p. 40.

May 3, 1919, **1**, No. 4992

*Significance and Surgical Value of certain Abdominal Reflexes. D. Ligat.—p. 729.
*Spinal Injury with Retention of Urine. P. N. Vellacott.—p. 733.
Primary Syphilis. S. F. Dudley.—p. 737.
*Treatment of Gonorrhea. H. E. Gibson.—p. 739.
War Injury from Signal Lights. W. J. Rutherford.—p. 741.
*Lung Puncture in Treatment of Influenzal Pneumonia. M. Benaroya.—p. 742.

Significance and Surgical Value of Certain Abdominal Reflexes.—Ligat emphasizes that no abdominal examination is complete unless, in addition to other clinical methods, a thorough investigation of the abdominal reflexes has been made and the results carefully noted. The skin and subcutaneous tissue are grasped firmly between finger and thumb and drawn away from the deeper layers of the abdominal wall. If an abnormal reflex is produced it is at once recognized—the patient winces, he may even cry out if a sharp response is elicited. Mackenzie has pointed out that pain is the only sensory reflex evoked in visceral disease. It follows, therefore, that all pain, except that caused by peritonitis, of which a patient complains, or tenderness that an observer may elicit, is due to a true viscerosensory reflex, and not in any way to pain or tenderness felt in the viscus itself. A pinch, which in a person with a spinal cord of normal tone would not have given rise to pain, now does so, on account of the stimulus due to the pinch being received by a part of the cord kept in an irritable condition by undue stimuli from a diseased viscus.

The severity of the pain produced varies widely. Usually when there is general evidence of acute inflammation of a viscus the pain produced by pinching is severe, and may be elicited over a long narrow vertical band of skin; this hyperalgesic band may correspond to parts of one, two, or even three spinal segments, but by careful discrimination of the point of maximum hyperalgesia the actual organ affected can be determined in most cases. In other cases, mostly those of a chronic nature, in many of which the patient has been complaining of vague abdominal pain only, and probably quite unable to indicate its precise locality, very careful examination is necessary, the facial expression being closely watched when the skin and subcutaneous tissue are pinched. It is in these cases that this method of examination is said to be especially valuable, for, by so examining, one is virtually converting a subjective symptom into an objective sign, and in many chronic cases this is the only sign which can be demonstrated and which indicates the actual organ at fault. Sometimes actual pain is not produced, the sensation being evidently difficult to define and described as unpleasant, curious, different from other places, and so on. In all positive cases a departure from normal sensation is evident. This method of examination separates the abdominal organs for clinical purposes into two sets: 1. Lateral: Gallbladder, appendix, fallopian tube. 2. Central: Stomach, duodenum, small and great gut. Illustrative cases are cited and the whole question is discussed at great length.

Spinal Injury with Retention of Urine.—The very large number of deaths from ascending infections after catheterization renders it essential to endeavor to discover some other method of relieving the retention in cases of spinal injury. The observations made by Vellacott in sixty-six cases leads him to conclude that passive treatment, i. e., allowing distension and overflow to take place—should be given a thorough trial, and attempts at expression should be made from time to time. Assistance may be found in the administration of drugs, especially morphin, the application of heat, etc. When dribbling of urine commences, expression is usually quite easy and the bladder can be emptied partially at regular intervals. This diminishes the stretching and thinning of its walls and should allow its muscle to recover tone more rapidly. If complications of the injury (hemothorax, etc.) make it advisable to relieve the distension, temporary paralysis of the sphincter by instrumental stretching may be tried. Even moderate stretching renders expression a simpler and easier proceeding in the earlier and spasmodic stages of retention. It is of the greatest advantage that the treatment of the bladder from the date of injury until the automatic stage is reached should remain in the hands of one person.

Treatment of Gonorrhea.—Gibson is impressed that the earlier the treatment the better the chance of recovery and the less likelihood of complications. The ideal is to combine local curative treatment with general treatment to build up the patient's resistance to the disease. For local treatment one should employ irrigations with as nonirritating and at the same time as potent an antiseptic as possible. Irrigation is to be preferred to syringing, as with an irrigation it is possible not only to use a larger volume of fluid than with a syringe but also to dilate the urethra to a greater extent, and so open out the various folds and crypts in the mucous membrane and drive the entrenched organism from its dugout. Care should be taken to avoid driving back infective material to the posterior urethra, either by complete irrigations or by use of instruments, early in the disease. The best antiseptic on the market in Gibson's opinion is flavine in strengths of 1/6000 to 1/8000. The best way of building up the resistance is with vaccines, given in large and constantly increasing doses. Medicines are useless, except to alleviate certain symptoms, such as dysuria, when they occur.

Lung Puncture in Treatment of Influenzal Pneumonia.—The treatment described by Benaroya has been employed in a series of forty-one patients, many very seriously ill. Their ages ranged from 10 months to 68 years and the patients showed all degrees of resistance. This treatment aims at determining a local accumulation of polymorphonuclear leukocytes, and so stimulating phagocytosis, by setting up a focus of irritation in the pneumonic areas. It is an application to the lung of the principle advocated by Kraske, in the local treatment of erysipelas. It may be considered analogous to laparotomy in the ascitic variety of tuberculous peritonitis. The first step is to determine accurately the situation and area of the consolidated patches. A hollow needle or trocar about 2 inches long is then introduced in the direction of the patch and allowed to remain in the lung for about thirty seconds. If more than one patch has been detected it is preferable to select the largest and to neglect the others. If the base is entirely affected, as in lobar pneumonia, or several patches of considerable size are present, a second puncture may be necessary. It was rarely needed to repeat the puncture in the above series of cases, and then only for exacerbation of the morbid process. Strict asepsis is essential. As regards the seat of election, the axillary or scapula lines are, if possible, to be preferred. As this method does not depend on the type of organism responsible it may be tried in every variety of pneumonia, influenzal, pneumococcal or even septic, following a trauma. The results in all these varieties have been favorable. A steady fall of the temperature is always to be expected, and in many cases it becomes normal in twenty-four hours.

Practitioner, London

May, 1919, **102**, No. 5

The Erect Posture. L. Williams.—p. 229.
Lichen Planus: A Review. J. M. H. MacLeod.—p. 235.
*Urinary Disturbances in Children and Adults; Cure by Electrical Methods. F. Hernaman-Johnson.—p. 239.
Neuroses and Psychoneuroses of the Sea. A. F. Grimbly.—p. 243.
Ductless Gland Therapy; Report of Cases. J. L. Masterman-Wood.—p. 259.
Reeducation of Voice after Operation for Intrinsic Cancer of Larynx. C. MacMahon.—p. 271.
*Common Causes of Persistent Headache and their Differential Diagnosis. K. Clarke.—p. 274.
Diagnosis of Syphilis; Plea for Immediate Wassermann. J. P. Walker.—p. 281.
Exceptional Recovery from Cerebrospinal Fever. D. Smith.—p. 282.

Enuresis Cured by Electrical Methods.—Almost all cases of enuresis, both in adults and children, Johnson has found to be amenable to the application of rhythmically interrupted sinusoidal or faradic current through the region of the bladder for fifteen minutes daily for a period of two to four weeks. Johnson stimulates the prostate, using a small test tube filled with water and corked. Through the cock is thrust a stiff wire, having a loop on the outside for attachment to the lead from the solenoid. The best tube is vaselined and introduced about 2 to 3 inches into the rectum. It is connected with the generator and the high-frequency current turned on for fifteen minutes. The treatment is given daily.

Common Causes of Persistent Headache and Their Differential Diagnosis.—Clarke urges that inasmuch as headache is only a symptom the cause should be sought for. He mentions cerebral tumor, eyestrain, chlorosis, nephritis, diabetes, toxic or infective states apart from specific fevers, alcohol, lead and syphilis, all probably giving rise to the pain by their direct vasomotor action on the cerebral or meningeal vessels; arteriosclerosis, hyperpiesis, meningitis, migraine and neurasthenia. Having once established the diagnosis, the case must be considered on its own merit as to treatment.

Bulletin de l'Académie de Médecine, Paris

April 8, 1919, **81**, No. 14

*Paralytic Form of Rabies. P. Marie and C. Chatelin.—p. 428.
*Transmission of Rabies to Fetus. P. Remlinger.—p. 437.
Carbon Monoxid Poisoning. V. Balthazard.—p. 439.
Sterilization with Formaldehyd. Barthélemy and G. Gross.—p. 441.

Paralytic Rabies.—Marie and Chatelin report the necropsy findings in a boy of 11 who developed symptoms suggesting poliomyelitis, a rapidly acute ascending paralysis, fatal in a few days. The child had been bitten on the upper lip by a dog five weeks before, and a period of extreme agitation and screaming had preceded by ten days the paralysis in the legs. Necropsy disclosed acute infiltration polio-encephalomyelitis, with the typical findings of rabies, confirmed by inoculation of rabbits. Rabies has been found in 218 dogs, two cats and one horse, since Jan. 1, 1919, in the Seine district.

Transmission of Rabies to Fetus.—Remlinger reports some striking experimental experiences which confirm Konradi's statements in 1916. Animals inoculated with rabies may not display any signs of the disease for from one to three months, while their young born in the interim present rabies and may have died before the mother shows any signs of the disease. Remlinger relates that one guinea-pig thus developed rabies 122 days after the inoculation, sixty-eight days after the casting of the litter, and thirty-eight days after the death of the last one of the young. In Konradi's guinea-pigs, rabbits and bitches the interval sometimes was over a year before the animal succumbed to the rabies that yet it had transmitted to its young in the uterus. These facts throw light on cases in which rabies has been transmitted to man by an apparently healthy animal; it may be harboring the rabies virus in its blood. Young animals may be apparently healthy and yet they may have been infected in the uterus, and they may develop rabies at any moment without further contact. The fact that the young dog or other animal has never had a chance for being bitten, thus does not exclude the possibility of rabies. The experiences related suggest also that possibly the fetus might become immunized by minute amounts of the rabies virus traversing the placenta. In conclusion he suggests further the possibility that the rabies virus might in certain cases induce other clinical pictures than typical hydrophobia or paralytic rabies. We know that it may induce Landry's paralysis, and it is possible it may be responsible for certain other forms of acute mania, etc.

April 15, 1919, **81**, No. 15

Meningitis in Influenza. M. Capitan.—p. 468.
Injectable Solution of Mercury Benzoate. E. Léger.—p. 473.
*Treatment of Paroxysmal Tachycardia. C. Fiessinger.—p. 476.
*Stereoscopic Roentgen Plates. Chabry.—p. 480.
*Prison Camp Undernourishment. C. Richet, Jr., and M. Mignard.—p. 481.

Cure of Paroxysmal Tachycardia.—Fiessinger declares that it is possible to arrest an attack of paroxysmal tachycardia by impeding the entrance of air, compelling respiratory effort. One woman of 40 with pulse of 200, cyanosis, the extremities cold and the chest crowded with râles seemed moribund, but she recuperated at once when forced to breathe through an apparatus (Pescher jar) which required a respiratory effort. One man always found relief in the paroxysm by running after his auto. Later, Nature came to his aid with asthma, the paroxysms subsiding when an attack of asthma supervened, the pulse then keeping slow for forty-three hours. Another man of 51 has the attacks of paroxysmal tachycardia come on while he is walking. He then starts to get over the ground very much faster, and this always aborted the attack in his experience with ten paroxysms. In the case of one young woman, the paroxysm of tachycardia had lasted for twenty-four hours, not modified by various measures, including pressure on the eyeballs. Finally she began to do breathing exercises, and at the second deep inspiration the paroxysm was arrested. A month later the paroxysm returned when she was in the street. She stopped and took three deep breaths, exhaling very slowly. The paroxysmal tachycardia subsided immediately. Fiessinger declares that any respiratory effort, inhaling or exhaling, kept up long enough will arrest the paroxysm of tachycardia. The only thing is to breathe deep and to be strong enough to do this. A professor at the Sorbonne developed paroxysmal tachycardia during convalescence from a fever, but he was too weak to breathe deep, and compression of the eyeballs had no effect. He died the next day. A fatal outcome was also the rule when the patients had been taking drugs to combat fever. Fiessinger saw two cases of the kind in patients convalescing from influenza. The pulse ran up to 190 or 200 and the patients were unable to make the effort to breathe deep. Each had taken three or four doses of acetylsalicylic acid. The effort of vomiting may arrest paroxysmal tachycardia the same as the effort of breathing deep, but the latter is simpler and easier, and its effect is amazing, he reiterates.

Stereoscopic Roentgenography.—Chabry describes a simple method with which it is possible to get the stereoscopic effect on a single plate.

The Undernourishment in the Prison Camps in Germany.—Richet and Mignard relate that repatriated civilians and soldiers frequently present a combination of symptoms suggesting those of actual starvation plus those of deficiency diseases. Emaciation, anemia and diarrhea dominate the clinical picture. Hypertrophy of the liver is common, and the skin shows numerous infectious lesions while the aspect of certain bones and joints recalls that of rachitis in children. Bradycardia is frequent, as also polyuria with pollakiuria, irritable asthenia, and modifications in the reflex responses.

Bulletins de la Société Médicale des Hôpitaux, Paris

Feb. 14, 1919, **43**, No. 6

Paralysis of Sympathetic Accompanying Aneurysm in the Neck. L. Lortat-Jacob and G.-L. Hallez.—p. 137.
*Curable Alcoholic Cirrhosis. H. Dufour and Le Hello.—p. 143.

Curability of Cirrhosis of the Liver.—Dufour and Le Hello assert that syphilitic cirrhosis of the liver is not the only form of cirrhosis that may prove to be curable. They here report two cases for which alcohol was undoubtedly responsible, and yet a clinical cure was realized under diuretics and tapping alone. The male patient was 51, and in four months he was tapped sixteen times, withdrawing an average of 16 liters each time. The woman of 50 was tapped twenty-five times within eighteen months, evacuating a total of 400 liters. Both patients have been apparently cured for over five years. No mercury or iodid was given.

Feb. 21, 1919, **43**, No. 7

Septicemia with Shiga Bacillus, but None in the Stools. G. Caussade and S. Marbais.—p. 145.
*Serodiagnosis of Typhus. E. Sacquépée and P. Delavergne.—p. 151.
The Leukocytes in Influenza. G. Lion and A. Crétin.—p. 153.

Serodiagnosis of Typhus.—Sacquépée discusses the agglutination of a strain of proteus bacilli by typhus serum. Tests with serum from fourteen patients with diseases other than typhus proved constantly negative, while agglutination occurred regularly with typhus serums. It was pronounced by the end of the first week, and persisted some time after recovery.

Paris Médical

April 12, 1919, **9**, No. 15

Historical Sketch of Paris Medical Faculty. H. Vaquez.—p. 293.
Apical Insufficiency and Large Ventricles. P. Merklen and Chuiton.—p. 306. See abstract p. 1497.

Presse Médicale, Paris

April 17, 1919, **27**, No. 22

*Fracture of Femur. E. Desmarest, G. Caldéron and M. Cañas.—p. 201.
Inter-Allies Conference on Aeronautics. G. Guillain.—p. 203.
*Treatment of Lagophthalmos. R. Leriche.—p. 205.
*Premonitory Signs of Epileptic Seizure. P. Hartenberg.—p. 205.
Gasoline Treatment of Scabies. F. Lévy.—p. 206.

Subtrochanter Fracture of Femur.—Desmarest and his co-workers state that the usual methods of treating fracture of the femur give deplorable results when applied to fracture in the subtrochanter region. This requires special measures, as they describe in detail. The main point is to apply continuous extension with bilateral abduction. Their illustrations show the principles involved and the best means to apply them.

Treatment of Lagophthalmos.—Leriche remarks that certain men with facial paralysis as the result of war wounds are particularly incommoded by the permanent inability to close their eyelids. Muscle transplantation may remedy this in some cases but is impossible in others on account of destruction of tissue. In this latter group of cases he has attacked the problem in another way; namely, by section of the cervical sympathetic which is followed by retraction of the eyeball and narrowing of the space between the lids, and thus effectually combats lagophthalmos. He has applied this method in one case of facial paralysis dating from 1915, and the man can now close his eyes as if by volitional control, and he is *enchanté* with the result, especially as the previous intense lacrimation has subsided likewise. The operation on the cervical sympathetic was by the same technic as for exophthalmic goiter.

Premonitory Signs of Epileptic Seizure.—Hartenberg discusses the sensations: chilliness, pruritus, tickling in one nostril, neuralgia and other sensory disturbances which may herald the approach of the seizure; also the circulatory signs, the motor, visceral and secretory, and the psychic signs which warn of the impending seizure. Besides these generally known premonitory signs, he calls attention to certain phenomena in some of his patients which herald a seizure. In one, the eyes grow more brilliant and the glance fixed and strange; in another, only one eye shows this change. In one child of 4, the pupils become extremely dilated; one adult sees a spark constantly floating in front of his right eye for two days before the seizure. Another has convergent strabismus come on, and in another the seizure is preceded by the whole face being twisted to the right side. In two women, the nose becomes very red a few days before the crisis; in another, merely the nostrils grow red. In one man, the ears grow red, especially the left ear, the side of the severest spasms. One man's cheeks grow blue, and another perceives a pulse in the epigastrium just before the seizure comes on. Another man sweats profusely on the days the seizures impend. Another epileptic has chronic coryza with profuse discharge but on the day or two preceding a seizure this discharge dries up, and the man is constantly rubbing his nose. There is a constant rise in temperature of half a degree C. during the days preceding the seizure in three women of 18, 68 and 69. One feebleminded boy of 8 announces the approaching seizure by beginning to tell of grandiose schemes for the future. The ages of the patients range from 4 to 73 years. By heeding the premonitory signs, the epileptics can be saved mishaps from seizures occurring unawares, and by compiling a complete list of the prodromes light may be thrown on the nature of the seizures, and possibly means of warding them off discovered.

Revue Médicale de la Suisse Romande, Geneva

January, 1919, **39**, No. 1

Influenza at Lausanne.' B. Galli-Vallerio.—p. 1.
*Hysteria or Pithiatism? F. Naville.—p. 13.
Ileus from Plum Stones Arrested by Cancer. H. Maillart.—p. 44.

Hysteria or Pithiatism?—Naville criticizes Babinski's doctrine of pithiatism as incomplete and misleading, and describes a case which is peculiarly instructive. The girl of 15 had been having for several years frequent and prolonged narcolepsy, convulsions, intermittent chorea, occasional slight mutism and functional paraplegia, with a whole train of nightmares, insomnia, paroxysmal headache, vertigo, anorexia, diverse algias, tremor, tachycardia and functional disturbances in vision, in short, an authentic case of *grande hystérie*. The whole seemed to be based on an emotional shock dating from seven years before which had been totally forgotten because it had been thrust into the subconscious sphere by the initial hysteric crisis. As soon as this emotive traumatism had been brought back to the girl's consciousness, the whole train of secondary symptoms cleared up and disappeared spontaneously, and the other functional symptoms progressively improved. There was no erotic factor evident in the case. The emotional shock to which Naville ascribes the hysteria was the disappearance of a young brother and the false news that he had been run over by an automobile. The girl has been apparently completely cured during the year or more since, having had no return of nervous troubles even during the bombardment of the city.

Deutsche medizinische Wochenschrift, Berlin

Feb. 6, 1919, **45**, No. 6

*Septic Lymphangitis and Lymphadenitis. Fessler.—p. 145. Conc'n.
*Detachment of the Retina. Birch-Hirschfeld.—p. 148.
*Silver Salvarsan and Biology of Syphilis in Man and Rabbits. E. Delbanco.—p. 150.
*Percussion of the Skull in Children. H. Koeppe.—p. 152.
*Nephrectomy with Diseased Second Kidney. M. Zondek.—p. 153.
Splint for Fractured Femur. H. Köhler.—p. 157.
*Infant Mortality in East Africa. P. Sick.—p. 158.

Lymphangitis and Lymphadenitis with Septic General Infection.—Fessler discusses tendon sheath phlegmons, felons, etc. He says of panaritium that there is scarcely any other common affection in respect to which so many sins are committed as this. The fate of the member, even life, may depend on its correct management. He warns not to wait for manifest suppuration but to cut down at the most painful spot to relieve the tissues from pressure. It is easy to determine the most painful spot by testing with the head of a probe, then cutting down to the tendon sheath the entire length of the finger. He advises blocking both the lateral nerves at the base of the finger under a tourniquet, as this shows up the wedge-shaped encroaching necrosis of the cellular tissue. This plug must be cut out to leave the focus gaping. If the stage of necrosis and suppuration has not been reached, the incision may prevent the death of the tissues. This is the only way to keep the infectious process from spreading. Antiseptic dressings, baths and hyperemia treatment aid in the healing of the focus. The suction bell helps to draw the necrotic plugs out of the felon, and the stasis hyperemia checks the lymphangitis. The dressings must be loose so as not to impede the outflow of pus. In speaking of gas phlegmons, Fessler warns that the heart must be kept stimulated but not with digitalis, as the toxins of the gas bacillus already have a depressing influence on the pulse.

Detachment of the Retina.—Birch-Hirschfeld reviews experimental research and clinical experiences with 142 cases of detachment of the retina between 1900 and 1910, with reexamination of most of the patients later. With spontaneous detachment of the retina, seen early, he applies in treatment bed rest, injection of saline and other mild measures, hoping for spontaneous reposition of the retina. If no or very insignificant improvement is observed, he proposes operative measures if the detachment affects the lower part of the retina, if the refracting media are clear enough for ophthalmoscopic supervision of the operative procedures, and if the pressure in the eye is not too much reduced, and there is no extensive tear in the region where it is proposed to operate. The functional capacity of the detached and the still adherent retina must be such that appreciable improvement is possible. The relatively slight chances for success must be fully explained to the patient beforehand. The first thing to be done is to remove the subretinal fluid. For this he prefers to trephine, cutting out a small disk, 1.5 to 2 mm. in diameter, and then aspirating the fluid. The retina can be seen then returning to its place, and with a compressing bandage it can be held in place, hoping it will become reattached. This actually did occur in 5 of 25 patients thus treated, and slight improvement was manifest in 5 others, but in 15 the progressive course of the detachment was not checked. Better results were obtained when he injected a fluid into the vitreous body to exert pressure on the retina. Various fluids have been used for this purpose, but he thought that the logical fluid for the purpose was the fluid he had just aspirated from back of the retina. As this fluid usually contains much albumin, up to 26 per thousand in his cases, he diluted it with a little saline, and thus could inject a somewhat larger volume than he had aspirated. He has applied this procedure in thirteen cases, all quite severe, refractory to milder measures, and comparatively favorable results were realized. In six of the cases there was more or less inflammation in consequence, in the interior of the eye, and this may have contributed to the favorable outcome as five in this group of patients were essentially improved. At the same time it worries the physician to behold this inflammatory process develop in a previously noninflamed eye, as exact dosage of the irritation and guarantee of its harmlessness are out of the question. Consequently in his later series he has restricted his intervention to trephining, aspiration and the compressing bandage. A spontaneous cure has been known in only about 1 per cent. of the cases of detachment of the retina on record. Mild measures were successful in about 5 per cent., and slight improvement was realized with them in 6 per cent. In 89 per cent. they failed completely. Puncture with or without electrolysis and section realized essential improvement in 4 per cent., slight improvement in 25 per cent. and no benefit in 71 per cent.

Silver Salvarsan.—Delbanco comments with enthusiasm on the new and supposedly more harmless salvarsan preparations which are now being made. He has applied silver salvarsan in 120 cases, making a total of 550 injections, all on outpatients, and has never witnessed any untoward manifestations. Only in five cases was there a tendency to transient congestion in the head, but these patients were soon able to go home alone. He cites as important Kolle's recent statement that colloidal silver alone has a pronounced action on syphilis in the rabbit. He suggests further that the way in which the spirochetes take silver stains seems to indicate some special affinity for silver. He remarks parenthetically that it is inexplicable why the glass syringes seem to suffer from the silver salvarsan notwithstanding the colloidal character of the solution. Experimental syphilis in the rabbit has been very successful recently, even to spontaneous coitus chancres on the male rabbit. The blood of a syphilitic in the primary period, even without a positive seroreaction, injected into the rabbit testicle induces a typical primary lesion swarming with spirochetes; syphilis is thus a clinical septicemia from the very first. He adds that silver salvarsan in a dose of 0.2 gm. banishes the spirochetes from the primary lesion when examined against the dark field microscope. With half this dose, the spirochetes return the next day. He emphasizes the prompt subsidence of the florid symptoms of the first and second period under silver salvarsan in his cases; it was combined with mercury in the majority. For a single course of treatment, only from 1 to 1.4 gm. of the silver salvarsan are required. (Its official name is Silbersalvarsannatrium. Kolle says of it, "The maximal effectual dose, 0.2 or 0.3 gm., is below the threshold of danger as the arsenic content of silver salvarsan is scarcely two thirds of that of old salvarsan". . . . "The silver acts chemically as a catalyzator of the arsenobenzol molecule, and biologically as the reenforcer of the specific action of arsenic on spirochetes." He ascribes the action of mercury in syphilis merely to its rendering the tissues toxic so that the spirochetes are unable to thrive in them. He says further that the spirochetes disappear in syphilis in the rabbit in a few days after injection of 0.03 colloidal silver per kilogram, and the primary lesion soon heals. Experiments with syphilized rabbits recently have shown that the intervals between doses as well as the size of the dose have a bearing on the effect of any of the drugs tested.)

Percussion of the Skull in Diagnosis.—Koeppe states that he found a high tympanitic note and cracked pot sound on percussion of the skull of children with abnormally high pressure on the brain from different pathologic processes, brain tumors, etc., and especially with miliary tuberculosis, meningism, otitis, and sometimes with high fever, pneumonia and influenza. As the pressure was reduced under lumbar puncture the tympanitic resonance grew less. In two cases of incipient tuberculous meningitis, this tympanic resonance was the first and for a long time the only symptom.

Nephrectomy and Treatment of the Diseased Mate.—Zondek reiterates that if the functional tests show good functional capacity, even in a diseased kidney, removal of the other kidney is justified when indications call for this. He describes three cases which show how apparently irreparable conditions may be remedied. In one case one kidney was functionally useless and the other ureter became obstructed with sand. He succeeded in dislodging the sand with the ureter catheter and rinsing out the kidney, restoring clinically normal conditions on this side.

Infant Mortality in East Africa.—Sick in commenting on the recent death of J. Dannholz, a missionary in East Africa who had taken a partial medical course, states that by his efforts the infant mortality in his district had been reduced from 75 to 13 per cent.

Policlinico, Rome

April 6, 1919, **26**, No. 14

Hysteric and Organic Aphonia. P. Caliceti.—p. 418.
*Magnesium Sulphate in Chorea. R. Cavalieri.—p. 421.
*Quinin and Influenza. G. Vico.—p. 422.
*Operation for Varicocele. E. Lay.—p. 429.
Enteroptosis. A. Cantilena.—p. 429.

Magnesium Sulphate in Treatment of Chorea.—Cavalieri reports gratifying success from subcutaneous and intramuscular injections of a 25 per cent. solution of magnesium sulphate in a case of extremely severe chorea in a boy of 13. The first symptoms had been noted twelve days before. The solution was made with 4 gm. of magnesium sulphate in 16 gm. distilled water, the dose of 2 c.c. was injected two or three times in the course of the twenty-four hours. The total amount of the drug thus given daily was 1 gm. in this case, and the child was able to sleep at night. The excitement and restlessness had prevented sleep before, and the boy had had to be tied to prevent serious injury from his spasmodic jerkings. By the end of the month he was able to feed himself, and was quite restored in six weeks although left with mitral insufficiency. The magnesium injections were kept up for twelve days.

Quinin and Influenza.—Vico reports another instance of influenza sweeping down on a hospital and prostrating nearly every one connected with the hospital except the 400 malarial inmates under the influence of quinin.

Varicocele.—Lay cuts the middle part of the venous plexus between two ligatures and fastens the stumps together again like the barrels of a gun, fastening the peripheral stump to the external inguinal ring and the other stump to the base of the peripheral stump close to the testicle.

Riforma Medica, Naples

March 22, 1919, **34**, No. 12

Pathogenesis of Bacillary Dysentery. G. Costantini.—p. 225.
*Symptoms from Apex of Lung. A. Campani and F. Bergolli.—p. 230.
Recent Literature on Gastric and Duodenal Ulcer. E. Aievoli.—p. 231.

Semeiology of the Apex.—Campani and Bergolli say that in the early phases of disease of the lungs a loss of elasticity in the region of the apex may be the only sign that anything is wrong. This can be detected by the lack of expansion of the lung at the apex when the subject sits up in bed, after long horizontal reclining. Auscultation shows that the respiration sounds at the apex on the suspected side are scarcely if at all audible. Gradually, in the course of about two minutes, the respiration sounds at the apex become audible, but they are not symmetrical at first. Gradually, however, the difference between the respiration sounds grows less and less, and they become symmetrical. This temporary asymmetry in the breathing sounds during the transition from the horizontal to the sitting positions seems to be an instructive sign of incipient pulmonary tuberculosis. Comparison of the pulmonary breathing sounds with the tracheal breathing sounds is also instructive for delimitation of the apex. The point where the apex murmur is first heard, in ausculting from the neck slanting downward, is marked on the skin. This point is lower the more pathologic the apex, as a rule, although with diffuse processes the faintness of the respiration is more instructive as the outlines of the apex are less distinct.

March 29, 1919, **35**, No. 13

Prophylaxis of Venereal Disease. R. Stanziale.—p. 245.
Manganese Preparation in Treatment of Hypopyon Keratitis. R. Marinosci.—p. 248.
Errors in Diagnosis with Abdominal Wounds. E. Santoro.—p. 254.
*Disturbances from Displacement of Uterus. E. Aievoli.—p. 262.

General Disturbances from Displacement of the Uterus.—Aievoli discusses the symptoms which can be traced to displacement of the uterus, saying that considerable skepticism is unavoidable with extragenital symptoms. Neuropathies ascribed to backward displacement can generally be explained by an unstable nervous and mental state; this depends more on infantilism than on the static anomalies in the genital sphere. But metrorrhagia and abnormal menstruation are liable, from the interference with the circulation of blood and lymph which is inevitable with retrodeviation plus flexion, and the abnormal bacteriologic conditions likely to result. Retrodeviation may exist without these, and there may be no signs of stasis and congestion even with retrodeviation and the above conditions. The danger of retrodeviation for pregnancy often turns the scale in favor of intervention in dubious cases.

Rivista Critica di Clinica Medica, Florence

March 15, 1919, **20**, No. 11

*Local Epidemic of Goiter. P. Rondoni and A. Bellini.—p. 121. Conc'n.

March 22, 1919, **20**, No. 12

Simplification of Kjeldahl Test for Nitrogen. E. Pittarelli.—p. 133.

Epidemic of Goiter.—Rondoni and Bellini relate that goiter suddenly appeared in a district near Florence where its endemic presence had not been previously known. Eleven of those affected were given ten drops of tincture of iodin daily, and three were treated with salol and benzonaphthol, each 2 gm. per day and later with 1 gm. of thymol. This intestinal sterilization did not show any effect on the goiter, while in all those taking these small doses of iodin the goiter retrogressed, and in some completely disappeared. No factors could be discovered which could be regarded as responsible for the novel epidemic, unless possibly the weather in this season might have checked the growth of certain plants which normally supply iodin to the air or to the food. But this does not explain why the twenty cases were restricted to one small district.

Brazil-Medico, Rio de Janeiro

March 8, 1919, **33**, No. 10

*Roentgen Finger Prints. J. A. G. Fróes.—p. 73.
*The Microbe of Venereal Granuloma. H. de B. Aragão.—p. 74.
*Gastroptosis. O. Clark.—p. 77.

Finger Roentgenograms for Identification Purposes.—Fróes regards as important progress in anthropometric identification, Béclère's recent endorsement of "anthropometric radiography of the thumb" as a further form of identifying records. Fróes suggests, however, that it would be better to include the outline of the nail, and not to restrict the records to the thumb. This *roentgendactyloscopia onychographica,* with the outline of the finger nail and of the terminal phalanx, adds thus two new important and specific elements to the record.

The Microbe of Venereal Granuloma.—Aragão states that the encapsulated bacillus, which he, with Vianna, found as the characteristic germ of venereal granuloma, is the same as Donovan's bodies. As its morphology and mode of scission differ from those of other microbes, they regard it as a new species and in their publications on the subject in 1912 they named it the *Kalimmato bacterium granulomatis.* He reports now that their further research has confirmed their statements on its mode of reproduction, its reactions and parasitism.

Gastroptosis.—Clark remarks that the surgeons in Brazil are living in a vicious circle; they have a high death rate because they do not see patients with chronic abdominal affections until they are in an advanced stage of the disease, and, on account of the high death rate, they do not get the patients in time for successful operations. In the United States, he adds, the surgeons live in another sphere, with fine statistics on account of early operations, and a chance for early operations on account of the low death rate. Brazil has great surgeons, he reiterates, but they can operate only for complications, seldom for the primary affection. He describes three cases of gastroptosis which represent the three schools of opinion on gastroptosis. One was a case of asthenic dyspepsia requiring merely the Weir Mitchell treatment for complete subsidence of all the previous distressing disturbances. In the second case severe symptoms for three or four years, gastralgia and gastroptosis with extreme dilatation and retention, and finally melena were ascribed to a duodenal ulcer. The laparotomy showed the veins in the stomach very turgid but otherwise the stomach and the duodenum were apparently sound, and after gastropexy all disturbances subsided at once and permanently. These two cases show that both Stiller and Rovsing are correct in their assumptions in certain cases, and that one single law cannot apply to all. In a third case, symptoms from the stomach indicated gastric ulcer accompanying gastroptosis, without the least tenderness at McBurney's point, but the laparotomy revealed the upper digestive tract sound, except for the gastroptosis, while the appendix was found chronically diseased. Complete cure followed gastropexy plus appendicectomy.

Cronica Medica, Lima

February, 1919, **36**, No. 668

*Treatment of Gastroduodenal Ulcer. E. Odriozola.—p. 31.
Malarial Psychoses. C. A. Bambarén.—p. 37.
Identity of Cuchipe and Yaws. J. F. Martínez.—p. 45.
Pathologic Anatomy of the Lymphatic Gland. O. Hercelles.—p. 52.

Gastroduodenal Ulcers.—Odriozola emphasizes the necessity for the physician to be calm and reassuring when summoned to a patient with hemorrhage from the bowel and other signs of gastro-intestinal ulceration. These hemorrhages scarcely ever prove fatal, and are arrested usually by enemas of hot water (45 C. or 113 F.) with 0.01 gm. opium every two hours, or an injection of morphin to relieve the pain which usually preceded the hemorrhage and persists. He protests against saline enemas or infusion as the salt tends to increase the secretion of gastric juice. Thirst is combated by moistening the lips with glycerin and giving a little ice to suck or lemon juice.

Medicina Ibera, Madrid

March 22, 1919, **6**, No. 72

Radium Treatment of Skin Diseases. E. A. Sainz de Aja.—p. 249. Cont'n.
Grave Ulcerating Syphilitic Lesions. Sicilia.—p. 253.
Deep Abscess in Neck from Spontaneously Healing Mastoiditis. F. Casadesus.—p. 254.

Prensa Medica Argentina, Buenos Aires

March 10, 1919, **5**, No. 28

Bronchopathy from Inherited Syphilis. Castex and Romano.—p. 274. Cont'n.
*Nerve Elements in Auriculoventricular Bundle. P. M. Barlaro.—p. 277.
*Nationality and Dementia Praecox. F. Gorriti.—p. 282.

Nerve Elements in the Auriculo-Ventricular Bundle.—Barlaro gives twelve illustrations of the heart and the microscopic findings in the auriculo-ventricular bundle, and protests that too much importance is assigned to the bundle of His and not enough to the intracardiac nervous system. He theorizes to explain the birth of the auto-impulse, ascribing it to the system of minute nerve ganglia seen in the microscopic sections of the bundle of His in cattle.

Nationality and Dementia Praecox.—Gorriti states that among 1,410 cases of dementia praecox at the National Insane Asylum of Argentina, twenty-six nationalities are represented. Foreign nationalities form over 50 per cent. of the total although their population is so small compared with the Argentine population. The principal contingents are Spanish, 279 to a population of 512,742; Russian, 32 to 54,956 and Italian 275 to 587,497. Many of the dements born in Argentina have foreign parents. Consequently immigration is an important factor in mental disease in countries with much immigration. He comments that the persons that take the step of emigrating are usually more adventurous and unstable members of a community, easily influenced by the example of others' emigrating, and liable to suffer from the change in customs and habits, the disappointments and hardships of the new life, especially in the cities.

Reforma Medica, Lima

February, 1919, **5**, No. 54

Care of the Insane in Peru. B. Caravedo and others.—p. 19.

March, 1919, **5**, No. 55

Case of Relapsing Fever at Lima. C. A. Zevallos.—p. 35.
Influenza at Lima. R. F. Córdova.—p. 37.
Chemistry of Stomach Pathology in Andalucia (Spain). F. F. Martinez.—p. 39.

Repertorio de Medicina y Cirugia, Bogotá

March, 1919, **10**, No. 6

*Encysted Peritonitis in Upper Abdomen. R. Franco F.—p. 284.
*Pyelitis *in* Children in Bogotá. J. Bejarano.—p. 293.
Indications and Technic for Venesection. R. Sanmartin L.—p. 302.

Encysted Peritonitis.—Franco evacuated a collection of pus in the cavity formed by the greater and the lesser omentum and the posterior aspect of the stomach. It had formed a round, almost fluctuating mass, filling nearly the whole of the upper half of the abdominal cavity, with dulness except where the stomach had been pushed up. Both the purulent pleurisy and the encysted peritonitis were the work of the pneumococcus, and had been preceded not long before by influenza. The best mode of access was through the gastrocolic omentum.

Pyelitis in Children in Bogotá.—Bejarana says that in no other pathologic entity is there so much vagueness and imprecision as in pyelitis in children. It is often masked by the primary disease responsible for it, especially gastrointestinal disease in young children. Polyuria, particularly at night, and a milky appearance of the urine are the most suggestive manifestations, aside from the pyuria. The mothers—"those great empiric clinicians"—tell the physician that the child "wets a little more than usual in the night." Pain in the costovertebral angle and at Bazy's point is a useful sign when present, suggesting involvement of the ureter. A tendency to edema of the legs was always evident in his cases, even on a salt-free diet. He comments on the great frequency of pyelitis in children at Bogotá; it is liable to follow typhoid, influenza, pneumonia and enteritis. Possibly the climate has something to do with its prevalence there. In all his cases and those he has heard of from others, the children were all girls, the age from 6 months to 7 years. The pyelitis seems to take a long time to heal at Bogotá, ten or more months elapsing—at least in his cases—before he could affirm a definite cure. After the acute phase was past, in one case the pyelitis seemed to slumber for two months and then the symptoms all returned without appreciable cause. In all the cases of this kind, the primary disease had been intestinal infection. One child of 15 months still has this recurring pyelitis which first developed at 6 months. None of his cases have terminated fatally. He has found potassium citrate effectual in transforming the reaction of the urine to alkaline, the fever subsiding and diuresis becoming profuse under it. When a purgative is given, this diverts water away from the kidneys, and the symptoms of pyelitis flare up again. There is no specific remedy, and treatment can be only tentative.

Revista Clinica, Medellín

June, 1918, **3**, No. 9

*Appendicectomy in Colombia. A. Castro.—p. 394.
*Slow Endocarditis. *L. Posada Berrio.—p.* 430.
Suppurating Phlebitis after Hysterectomy for Incipient Cancer of Cervix. A. R. Moreno.—p. 437.

Appendicectomy in Colombia.—Castro refers merely to the state of Antioquia, in Colombia. He reviews 228 appendicectomy operations that have been done there up to November, 1917. The appendicitis was traced to gonorrhea in a large number of cases in women, and appendicitis seemed to occur frequently in the pregnant. The appendix was often involved in right tubal pregnancy.

Slow Endocarditis.—Berrio comments on the constant stereotype picture presented by this disease, and yet its comparative rarity causes the symptoms to be frequently ascribed to everything but the right cause. There is almost invariably a history of acute articular rheumatism in the past, and some recent tonsillitis or other acute infection. Purpura never fails to develop at some stage of the process, and joint disturbances, enlargement of the spleen and the heart lesions are explained by the streptococcus in the blood. A case recently encountered presented also the typical painful red nodules in the fingers which some regard as pathognomonic. The pulpa of the fingers or toes is a frequent site of nodules. They may suggest an incipient felon. Painful red patches may be found on the limbs or trunk. Death occurs in from four to twelve months.

March, 1919, **3**, No. 11-12

*Dyspnea in Relation to Abdominal Cancer. Braulio Mejia.—p. 511.
Gangrene of the *Extremities.* Gil J. Gil.—p. 554.
Present Status of Our Knowledge of the Thyroid Bodies. A. Castro. —*p. 560.*

Dyspnea with Abdominal Cancer.—Mejia has noticed sudden difficulty in breathing as a prominent symptom with abdominal cancer, and is convinced that there is a causal connection between them. Sudden, unexpected dyspnea coming on without apparent cause in an elderly person has often proved the first appreciable warning of an abdominal cancer. In one case the dyspnea appeared suddenly during the night in a women of 68 without pathologic antecedents. The suspicion of gastric cancer was confirmed by the course of the case, the woman dying in six weeks with symptoms suggesting acute dilatation of the heart. In another case a man of 70, known to have long had a perfectly compensated valvular lesion and living a most hygienic life, suddenly developed dyspnea. Failing compensation was assumed until palpation revealed a tumor in the liver, already inoperable. Loss of appetite and weight during the last two months had not been heeded until the sudden attack of suffocation. Mejia ascribes the dyspnea to some toxic action on the centers in the medulla, and warns that a sudden attack of suffocation, without known cause, in the elderly, should always suggest the possibility of abdominal cancer.

Revista Española de Med. y Cir., Barcelona

February, 1919, **2**, No. 8

Relations Between Obsessions and Manic-Depressive Psychoses. R. A. G. Salazar.—p. 60.
**Treatment of Infections in General.* A. Arteaga.—p. 66.*

Treatment of Infections in General.—Arteaga declares that we cannot rely on vaccination to protect us against all infections as the results are uncertain in some and dangerous in others. But we can all guard against disseminating and contracting infection. The hands, the mouth and the nasal passages of patient and attendants can be repeatedly cleansed and disinfected. Hygiene rather than pharmacology is needed, stimulating the kidney and skin functioning and exaggerating the intestinal. He advises to refrain from all food during the first twenty-four or forty-eight hours, but sweetened lemonade should be given freely to act on the kidneys. The infection may be called an acute microbian anaphylaxis, and it should be treated along the same lines as any anaphylaxis, warding off exogenous toxins and promoting the elimination of the endogenous. He warns that fever alone, without unconsciousness or "limping" of the heart, does not require special treatment. Fever in itself is not dangerous, as is evidenced by the absence of delirium, stupor and convulsions in children with temperature running up suddenly to 104 F. He warns further against abuse of cool baths. He does not give them in typhoid, merely keeping the skin cool and clean, and has never had cause to regret it.

Revista Medica, Pueblo, Mexico

March, 1919, **1**, No. 8

Paracolon Bacilli and Paratyphoid Infections. J. Terrés.—*p. 169.*
*Treatment of Parasitic Diseases of Scalp. R. E. Cicero.—*p.* 177.
Transposition of Viscera. C. Govea.—p. 181; I. Farquet.—p. 182.

Treatment with Thallium Acetate of Parasitic Disease of the Scalp.—Cicero lauds roentgen treatment as superior to all other methods in treatment of ringworm, etc., as time and experience have confirmed Sabouraud's pioneer work in this line. But, as Cicero remarks, roentgen treatment is not always available, while excellent results can be obtained with thallium acetate which Sabouraud had been recommending before he turned to roentgen treatment. Cicero now has a record of 354 cases of alopecia treated with thallium acetate. It was effectual in causing the dropping out of the diseased hairs, after which the hair grew again apparently normal. He gave it internally, as a rule, in a 5 per cent. aqueous solution; two drops of this are equivalent to 0.005 gm. of thallium acetate, and he gives as many drops as is represented by twice the number of kilograms of the child's weight. The smallest dose given was 0.07 gm. to a girl that weighed 14 kg. and the largest, 0.195, to a woman that weighed 39 kg. No untoward by-effects were observed, while the hair grew in again afterward. The lashes and eyebrows did not drop out, as also the hair that had grown again after roentgen depilation. The hairs did not drop out after taking the thallium until an interval of two weeks had elapsed. The only by-effect was occasional profuse salivation.

Revista de Medicina y Cirugia, Havana

Feb. 25, 1919, **24**. No. 4

*Intestinal Delineator. M. Einhorn (New York).—p. 87.
*Indications for Operation with Bilateral Ureter and Kidney Lithiasis. J. A. Presno y Bastiony.—p. 93.
Factitious Conjunctivitis. F. M. Fernández.—p. 100.

Intestinal Delineator.—This article was the substance of an address by Einhorn at a meeting of the Academia de Ciencias Medicas, at Havana. It is accompanied by fourteen roentgenograms showing the delineator at different points on its way through the bowel.

Bilateral Ureterorenal Lithiasis.—Presno discusses the indications with bilateral lithiasis, and reports the case of a woman of twenty-six who had had kidney colics at times since the age of 14. She had borne four healthy children. In 1917, nephrostomy was done on the right kidney. She was free from pain for forty-one days, Then the pain returned and has persisted since. She never had pain in the left kidney but the roentgen rays showed a large calculus in the pelvis of the left kidney although it had never made its presence felt and would have escaped detection except for the roentgenoscopy. The operation included extraperitoneal ureterolithotomy on the right ureter, followed by pyelotomy and pyelostomy for the silent calculus in the left kidney. The pains and disturbance in the right kidney proved to be merely reflex phenomena from the stone impacted in the ureter.

Revista de Medicina y Cirugia Practicas, Madrid

Feb. 14, 1919, **122**, No. 1542

Vaccine Therapy or Lymph Therapy in the Thoracic Complications of Influenza. D. H. Villalobos.—p. 161.

Revista Medico-Cirurgica do Brazil, Rio de Janeiro

October and November, 1918, **26**, Nos. 10-11

Influenza in Brazil. C. Seidl.—p. 435; C. Seidl and others.—p. 473.
Prophylaxis of Cholera. C. Seidl.—p. 500.
The Trade in Rags. Its Dangers and Prophylactic Measures. M. de Abreu.—p. 503.

December, 1918, **26**, No. 12

Report of Chief of Public Health Service in Brazil, 1912-1918. C. Seidl.—p. 517.

Semana Medica, Buenos Aires

Feb. 13, 1919, **26**, No. 7

Film Treatment of Burns. O. Ivanissevich and H. Gregorini.—p. 157.
*Topical Treatment of Pleurisy. A. Cetrángolo.—p. 161.
Increasing Prevalence of Pulmonary Tuberculosis. E. R. Coni.—p. 165.
Toxicologic Study of Aconitin. L. P. J. Palet.—p. 166.
*Poisonous Anise. T. A. Tonina.—p. 167.
*Signs of Uremia. G. Giacobini.—p. 170.
Cholera and Yellow Fever at Buenos Aires in Nineteenth Century. G. Rawson.—p. 171.
Geologic Possibility of Biogenesis by Infiltration of Salt Solutions. A. L. Herrera.—p. 172.
Insufflation of Iodoform Effectual Treatment of Nasal Myiasis. A. Iarcho.—p. 175.

Topical Treatment of Pleurisy Without Effusion.—Cetrángolo reports several cases of pleurisy in which he applied the technic for making an artificial pneumothorax, thus injecting air directly into the focus of the disease. By insufflating 100 c.c. of air in cases of plastic pleurisy, the pain and friction sounds subside, the distention stretching the adhesions. The pain is increased the first day, but then usually disappears completely. From one to three insufflations are made at weekly intervals, with progressive improvement. In some cases the air was medicated, that is, it was passed through cotton moistened with 2 per cent. camphorated oil. One insufflation of 100 c.c. of the camphorated air cured one man with severe pains in the shoulder, worse during repose and at night. The pain increased after the insufflation, but by the next day had vanished permanently. One man with tuberculous lesions in both lungs and intense pain in the right side was insufflated with 120 c.c. of air. The pains grew worse for two days and then vanished completely. Cetrángolo thinks that he is the first to apply topical medication to suspicious pleurisies with the artificial pneumothorax technic.

Convulsions After Taking Anise Tea.—Tonina gives the details of the cases mentioned in the Buenos Aires letter, p. 1309, in which children developed convulsions after drinking tea made from anise. The drug proved to be a poisonous kind of anise. The convulsions were accompanied by acute dilatation of the stomach, an actual ileus, with cyanosis.

Excessive Salivation as Sign of Uremia.—Giacobini calls attention to the intense salivary secretion which he has found accompanying uremic phenomena, rising and falling with them. In the graver cases there may be a sensation of the taste of urine in the mouth, changing to a salty taste as the uremia grows less intense. Some patients assert that milk tastes salty to them. There is also a tendency to fever at times with uremia, and hiccup.

March 13, 1919, **26**, No. 11

*Fracture of the Clavicle. A. Gutiérrez.—p. 253.
Whole Grain Bread. A. d'Alessandro.—p. 259.
*Resistance of Morphin and Cocain to Putrefaction. **L. P. J. Palet.**—p. 263.
Seashore School for Weakly Children. G. Sisto.—p. 264.
Psychophysiology of Aviators. J. A. López.—p. 270.
*Thyroid Sterility. G. Giacobini.—p. 272.
*Ampules with Visible Index of Sterilization. S. Cambronero.—p. 277.

Fracture of Clavicle.—Gutiérrez describes the various methods for treating fracture of the clavicle, and reports the details of twelve cases in which he applied Lejars' figure-8 plaster bandage, with eminently satisfactory results.

Morphin and Cocain in Putrefied Tissues.—Palet relates that morphin resists putrefaction well, as he was able to determine its presence in the putrefied tissues after seven months in a case of chronic addiction to morphin, and after two years and a half in a case of acute poisoning. Cocain (or products of its transformation) was found in the tissues seven months after death. The red tint assumed by the viscera when treated with Dragendorff's sulphuric acid method is a reliable sign of the presence of morphin.

Thyroid Sterility.—Giacobini has demonstrated the existence of sterility from ovarian insufficiency, and he now presents evidence to the effect that thyroid insufficiency may also be responsible for sterility. In the first of two typical cases, the woman, after bearing a healthy child developed constant headache and metrorrhagias, indicating thyroid insufficiency, and there was no further conception. In the second case the woman presented evidences of thyroid insufficiency and had never conceived during her eight years of married life. Under thyroid treatment their symptoms promptly subsided, and both women became pregnant soon after.

Index for Sterilization of Ampules.—Cambronero suggests that each ampule for intravenous use should have in the fluid inside a small glass tube containing some substance which does not melt until a given, very high temperature is reached. Then, if a scrap of some solid dye is incorporated in this solid substance we have an index which will show if the contents of the ampule have been properly sterilized. When the sterilizing temperature is reached, the solid in the glass tube will melt; this will dissolve the scrap of dyestuff, and the whole contents of the little tube will be stained throughout in their melted fluid condition. As they solidify again, the diffuse tint guarantees that at least the actually sterilizing temperature for the ampule has been attained.

Siglo Medico, Madrid

March 1, 1919, **66**, No. 3403

*Increasing Death Rate in Spain and Lower Birth Rate. J. G. Ocaña.—p. 165.
Varicella and Benign Smallpox. B. H. Briz.—p. 167.
Treatment of Bronchopneumonia with Therapeutic Catalysis. L. C. Cambon.—p. 168. Cont'n.
Introduction to Study of Operative Surgery. J. G. Capdevila.—p. 172.
The Sanitary Crusade. J. F. Rodriguez.—p. 178.

Vital Statistics in Spain.—Ocaña states that the death rate in Spain was 21.6 per thousand inhabitants in 1912 but gradually it increased to 26.14 in 1917. The birth rate in the corresponding years declined from 31.6 to 29.02. The birth rate in the cities in 1918 was only 26.01.

Vida Nueva, Havana

February, 1919, **11**, No. 2

Malignant Influenza in Cuba. E. F. Pla.—p. 26.
Local Anesthesia for Resection of Nasal Septum. E. R. Arellano.—p. 31.
Insanity in the Colored Race. A. Feria.—p. 35.

Nederlandsch Tijdschrift v. Geneesk. Amsterdam

Feb. 22, 1919, **1**, No. 8

Choice of a Trade and Classification of Workers. F. Hijmans.—p. 577.
*Artificial Knee. J. van Assen Jz.—p. 585.
The Future of the Medical Society. H. Brongersma.—p. 590.
Typhus without Exanthem. G. J. van Thienen.—p. 596.

Artificial Knee with Automatic Control.—Van Assen gives an illustrated description of the device which gives unusually good control of the artificial leg.

Hospitalstidende, Copenhagen

Feb. 5, 1919, **62**, No. 6

*Direct Method for Platelet Count in the Blood. O. Thomsen.—p. 161.
Magnesium Sulphate in Tetanus. J. Nordentoft.—p. 169.

Direct Blood Platelet Count.—Thomsen comments on the unreliability of the usual methods in vogue for determining the blood platelet count, and describes a method which seems to be quite accurate. He found with it a blood platelet content of from 206,700 to 413,400 in healthy persons, the average being below 300,000. He examined sixty-eight persons, sick and well, including some with infectious diseases. In the latter the platelet count was high. His method consists in preventing coagulation in the blood by adding a little sodium citrate, then setting aside until the corpuscles have settled to the bottom, and then counting the blood platelets in the citrated plasma above. The platelets do not settle down until after several hours, while the corpuscles settle not only by their own weight but by the influence of agglutination of which there is always more or less in different specimens of blood. He gives formulas and tables to facilitate the computations.

March 19, 1919, **62**, No. 12

*Deforming Spondylitis in Relation to Sciatica. H. I. Schou.—p. 365.

Spondylitis Deformans and Sciatica.—Schou reports 15 cases of neuralgia in the legs in which there were evidences of deforming spondylitis, most pronounced in the lumbar portion of the spine. Twelve of the patients were men from 50 to 81 years old, with one man of 37 and one of 40. They were classed as cases of sciatica, but the pains were localized in the domain of the femoral nerve, and increased during exercise. In 2 of the men the pains were bilateral. There was tenderness over the sciatic nerve in most of them, but in 2 there were no tender points to be found, although the pains were severe; in one case there was tenderness in the lumbar musculature. The pains started in the lumbar region, and there were frequent periods of remission.

Points like these, in which the neuralgia differs from ordinary sciatica, call for roentgen examination of the spine in such cases. The evidences of the spondylitis were most marked in the lumbar region, that is, near the lumbar plexus and where the upper roots of the sciatic nerve emerge from the spinal canal. Reexamination a few months to four years later showed that 5 of the 12 patients had quite recovered, 5 still had pain when exercising, and 2 of the patients were still incapacitated by their affection. The exostoses with deforming spondylitis may merely impede the circulation and thus induce the neuralgia without direct compression of the nerve, or the nerve root may degenerate under the influence of compression and the neuralgia finally disappear. In a further series of 3 cases, roentgen examination showed a single large exostosis on the spine or sacrum, in men or women between 54 and 56, with symptoms of sciatica on the same side as the exostosis.

March 26, 1919, **62**, No. 13

*Necropsy after Reduction of Hip Joint Luxation. H. Scheuermann.—p. 393.
*Semicentennial of First Publication on Adenoid Vegetations. E. Schmiegelow.—p. 398.

Necropsy Findings in Hip Joint After Bloodless Reduction.—Scheuermann gives the roentgen and necropsy findings in the case of a little girl, not quite 4, who died from pneumonia nine months after correction of congenital dislocation of both hip joints. The conditions approximated normal almost completely. The upper capsule pocket in which the head had previously rested had shriveled and shrunk until not a trace of it remained. Among the lessons taught by this case is the imperative necessity for solid fixation with plaster after reduction, as the upper margin of the deformed acetabulum is weak, and the retention of the head in its socket is due almost exclusively to the shriveling of the capsule pocket and the development of the glenoid ligament, both of which occurred faultlessly in this case. The cast must include the trochanter, and the correct position of the head should be verified with roentgen examination after a month. He adds that in every case it is important to place the femur from the very first in right-angled abduction and outward rotation. This is the only way to ensure the development of the glenoid ligament and the shriveling of the capsule which are indispensable to successful retention of the head.

Semicentennial of First Report on Adenoid Vegetations.—Schmiegelow's address was delivered at a special meeting of the Danish Otolaryngologic Society in honor of the semicentennial of H. W. Meyer's pioneer publication on adenoid vegetations. He discusses the importance of these vegetations for otology and medicine in general, and recalls that Meyer's first communication on the subject appeared in this same journal, the *Hospitalstidende*, Nov. 4, 1868. Meyer died in 1895, nearly 71 years old, after seeing his assertions in regard to adenoid vegetations confirmed the world around.

Hygiea, Stockholm

Feb. 15, 1919, **81**, No. 3

*Convalescent Serum in Prevention and Treatment of Influenza. L. Ehrenberg and A. Barkman.—p. 113.
*Bacteriology of Stools of Fishes. H. Huss.—p. 125.

Serotherapy in Influenza.—Ehrenberg injected 40 c.c. of convalescent serum by the vein in twenty cases of influenza. The results were disappointing.

Bacteriology of Stools of Fishes in Relation to Tests of the Water.—Huss discusses whether the bacteria in the stools of fishes could modify the response to Eijkman's fermentation test of water. In research on twenty-four living and thirteen dead fishes, the bacteria from the stools of the fish did not seem to have any influence on this fermentation test.

Ugeskrift for Læger, Copenhagen

March 6, 1919, **81**, No. 10

*Infectious Jaundice. Juul.—p. 431.

Infectious Jaundice.—Juul remarks that comparatively little has been published in Denmark on this subject, and the reports have labeled the disease catarrhal icterus or epidemic jaundice but the nature of the disease was not determined. The discovery elsewhere of the icterohemorrhagic spirochete has cleared the way for effectual treatment and prophylaxis. The present status of our knowledge on the subject is reviewed.

March 20, 1919, **81**, No. 12

*Pus Content of Urine. C. Jørgensen.—p. 509.

Quantitative Determination of Pus in the Urine.—Jørgensen expresses surprise that greater attention is not paid to the quantitative determination of pus in the urine now that Norgaard has given us a reliable method for the purpose. He mixes hydrogen dioxid with the urine, collects the oxygen that is released and measures the total at the end of three hours. The number of cubic centimeters of oxygen per 1 c.c. urine is the index of the catalase action, and hence throws more light on suppurative disease in the urinary apparatus.

Alexander Lambert

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THE ETIOLOGY AND TREATMENT OF THE DIARRHEAL DISEASES OF INFANCY

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The prevention of infant mortality is one of the most important medical questions of the day. More babies die every year from diarrheal diseases than from any other one cause. These diseases are largely preventable, and in most cases respond to proper treatment, whereas many improperly treated patients die. It is, therefore, essential in any affort to reduce infant mortality that all physicians dealing with children should have as clear an idea as possible of these conditions.

Any diarrhea is caused by increased intestinal peristalsis. This increased peristalsis is caused by some irritant acting on the intestinal mucous membrane, and it is best to classify diarrheal conditions according to the type of irritant that is causing the trouble. Broadly speaking, according to this method of classification the diarrheal diseases of infancy may be divided into three groups: (1) mechanical diarrhea, due to mechanical irritation; (2) fermentative diarrhea, due to chemical irritation, and (3) infectious diarrhea, due to bacterial irritation.

In the first group, the irritation is mechanical and is caused by undigested pieces of food or by such things as fruit skins or seeds.

In the second group the trouble is caused by irritating products from fermentation or putrefaction of food in the intestine, brought about in several different ways, as we shall see later. There is no infection by bacteria of the intestinal mucous membrane in this condition; it is the intestinal contents which are infected.

In the third group there is actual invasion of the intestinal mucosa by bacteria, with catarrhal inflammation, or often actual ulceration. It is of great practical importance to bear in mind these distinctions, as the feeding for the different sorts of diarrhea may be entirely different; what is proper for an infectious case might be fatal in a fermentative case. I cannot emphasize too strongly that not all infantile diarrheas are the same, and that they should not all be treated in the same routine manner. The first essential is a correct diagnosis, and in order to arrive at this the etiology of the three groups must be thoroughly understood.

I. MECHANICAL DIARRHEA

This type of diarrhea is fairly common, and is more likely to be seen in children above the age of 1 year than in those younger. It is caused by mechanical irritation of the delicate intestinal mucosa from such things as grape skins, cucumbers and raw fruit. It is a common practice among many ignorant people to feed all sorts of indigestible foods, particularly raw fruit, to small children from 1 to 5 years of age, long before they are ready for it. Some children seem to be able to stand it, but the majority cannot, and no raw fruits should be fed to any child under 5 years old. In many cases the mechanical irritation of the intestine paves the way for organisms to attack it in the irritated places so that often a mechanical diarrhea may change to one of the true infectious type. A typical case of mechanical diarrhea would run about as follows: A child of 2 is given a peach to eat, skin and all. The peach may be ripe, or it may not be. Soon after, the child is taken severely sick with vomiting and diarrhea. The stools are usually five or six in the twenty-four hours, and are likely to contain undigested peach pulp and skin. The vomiting may be so severe as to be uncontrollable, and it is in this type of diarrhea that gastric disturbance is most common. In some cases there may be a tremendous amount of toxemia, and not infrequently these children die, partly, I believe, from acidosis caused by the severe vomiting, and partly probably from the absorption into the circulation through the injured intestinal wall of toxic material or possibly bacteria from the intestine. Every practitioner of experience has seen cases such as this. Last summer I saw a boy of 6 at the Children's Hospital who died in forty-eight hours from eating a raw cucumber. In ordinary cases the child will be well in two or three days, and the diagnosis and treatment offer no difficulty save in those cases which develop infectious diarrhea.

The treatment consists simply in purging the child with casor oil or calomel, putting him to bed, giving him barley water or some other gruel for twelve hours, with plenty of water, and then starting him on a bland, nonirriating diet of cereal and boiled skim milk. This is the simplest and least important of the infantile diarrheas.

II. FERMENTATIVE DIARRHEA

This is a more complicated and important condition, and is the most common diarrhea of babies. It is most likely to occur in children under 1 year, but may be seen at any age. It is brought about by abnormal decomposition of food in the intestine, caused either by the bacteria which are already there or by bacteria introduced from without. The products of fermentation irritate the intestinal mucosa and cause a diarrhea, but the mucous membrane is not attacked by bacteria. The abnormal decomposition is usually that of sugar, and may be caused in several ways. In order for sugar fermentation to occur two conditions must exist: unabsorbed sugar in the intestine, and bacteria in the same portion of the intestine to attack it. Under normal conditions the small intestine is relatively sterile, the large intestine is swarming with bacteria. Therefore, any conditions that allow a considerable amount of undigested sugar to proceed lower than is normal in the digestive tract, or which will allow bacteria to flourish in the small intestine, where there is always unabsorbed sugar, will bring about sugar fermentation. Let us consider some of these conditions.

1. *Overfeeding with Sugar.*—If too high a percentage of sugar, or if too much food, thus giving a large amount of sugar, is fed to a baby, all of the sugar cannot be absorbed. What is not absorbed passes into the lower part of the intestine and the ever-ready bacteria there attack it and ferment it.

2. *"Parenteral" Infections.*—It is well known by every practitioner that babies suffering from such affections as rhinitis, bronchitis or otitis media are likely to have loose, greenish stools. The probable reason for this is that in these conditions the digestive juices are reduced in amount, so that sugar is not digested so well as normally, and thus is fermented; or that under the general debilitating influence of any extra intestinal disease the intestinal mucous membrane loses some of its antibacterial power and thus allows bacteria to flourish higher in the intestine than they would normally.

3. *Overheating.*—Overheating of the body is an important cause of sugar fermentation. This is well known clinically and has also been proved by animal experimentation. The practice of dressing babies too warm in hot weather is undoubtedly the cause of a good many cases of sugar diarrhea. The explanation of this is probably very similar to that for "parenteral" diarrhea. Owing to the debilitating heat the digestive juices are lessened in amount, and the efficiency of the mucous membrane is impaired in such a way that undigested sugar is permitted to pass down where bacteria can get at it, or the bacteria are allowed to come up and flourish where the sugar is.

4. *Nervous Exhaustion and Excitement.*—These may bring about sugar fermentation, probably in a way similar to that in which it is brought about in the last two conditions I have discussed. However, it is not a particularly frequent or important cause of sugar fermentation.

5. *Constitutional Weakness.*—There are certain babies who, on account of constitutional weakness, never seem to be able to take much sugar, or indeed much food of any sort, without diarrhea. It is probable that their digestive juices are inefficient, and that there is always a great deal more bacterial growth in the small intestine than there should be.

The types of sugar fermentation enumerated above are all brought about by the normal intestinal bacteria's taking advantage of the abnormal conditions of the host. The next and by far the most important type of sugar fermentation is caused by abnormal bacteria introduced from without in bad milk. Bad milk is, I believe, the most potent source of sugar fermentation that there is, and gives rise to the most severe cases of diarrhea. There is probably no specific organism that accomplishes this, although investigators have tried at various times to look on the condition as a specific infection. A great many different sorts of bacteria, when introduced into the small intestine, may bring it about, and probably two of the most common offenders are the *Bacillus aerogenes-capsulatus* (gas bacillus) and the colon bacillus.

The foregoing will serve to show the main causes of sugar fermentation; let us now see what chemical processes are involved. When sugar is fermented by bacteria, acids are formed. These may be divided into two groups: the volatile acids, such as formic, acetic and butyric, and the nonvolatile acids, such as lactic. The volatile acids, particularly, are formed in large amounts, and are the ones which do the most harm. The nonvolatile acids are relatively harmless. It is surprising to see how much free acetic acid may be recovered from the stools of some babies with sugar fermentation, and when one takes into account its extremely irritating nature it is easy to see how much damage may be done. The volatile acids cause harm (1) by increasing peristalsis and causing a diarrhea by irritating the intestinal mucosa; (2) by injuring the mucosa in such a way that its antibacterial function is impaired, or to such an extent as to allow toxic material from the intestine to pass through into the general circulation, a thing which would never happen normally; (3) by drawing on alkali reserve of the body in an attempt to neutralize the excessive acidity, thus probably helping to cause an acidosis; and (4) by upsetting the normal chemical processes of digestion, most of which cannot go on satisfactorily in an excessively acid intestine.

DEGREES OF SUGAR FERMENTATION

In a rough way, sugar fermentation may occur in three degrees of severity, which vary a good deal in their chemical conditions and clinical appearance.

1. The condition may be of a very mild type, in which a normal baby has two or three very acid stools a day of a consistency rather looser than normal. These stools may be of the normal color, or slightly greenish, with usually only a little mucus. The baby is not sick, the condition is a very mild one and almost always clears up readily with proper treatment. Its importance lies in the fact that untreated, the condition may become severe, and may ultimately lead to most serious results. This may be seen at any time of year, and probably has nothing to do with bad milk.

2. It may be a more severe condition, usually seen in the summer during a "muggy spell," but may occur at any time. The baby will have from five to ten very loose stools a day, containing a good deal of mucus, and many small soft curds of undigested milk. He is fussy and irritable, but is not very sick in most cases. His buttocks are likely to be red and excoriated from the excess of acid in his stools. The temperature is usually from 99.5 to 101. In this section of the country, at any rate, I believe this type of diarrhea is caused more often by bad milk than in any other way. In other sections where all milk fed to babies is boiled as a routine, it may be more often caused by some of the other agencies already enumerated. The condition is a local intestinal one; the intestine has been irritated, the processes of digestion have been disturbed, but the baby's body chemistry as a whole has not been upset. The process has as yet caused no trouble further than in its original locus, the intestine. If the patient is properly treated, the disease should be arrested without difficulty; improperly treated or neglected, the baby may pass over into the state which I shall call Type 3, a much more serious condition ("alimentary intoxication").

3. In this case the baby is very sick. He usually has a high temperature, but in certain cases he may be so prostrated that the temperature is subnormal. The fontanel, abdomen and eyes are sunken, the skin hangs loosely on the flesh, and has lost its elasticity—all from a loss of water. There is a profuse watery diarrhea, ten to twenty stools in the twenty-four hours. The baby takes no interest in his surroundings, his mentality is very dull, and he may be roused with difficulty. The breathing is deep and sighing (hyperpnea), and the urine may show sugar and casts. This is the picture of "alimentary intoxication," and a most precarious and serious condition it is. Here the process originally starting as a local intestinal condition has progressed so that it has changed the general metabolism, and has perverted the chemistry of the entire body. There is a negative nitrogen and salt balance, there is loss of a large amount of fluid, very often severe acidosis, and last, but not least, it is probable that many injurious substances from the intestine are absorbed into the general circulation through the injured intestinal mucosa, thus adding to the severity of the condition.

I. TREATMENT IN VERY MILD CASES

Many normal babies are likely to have periods of mild sugar fermentation occasionally. In nearly all the following simple treatment will clear the condition up, often in twenty-four hours, and will prevent the development of a severe sugar fermentation. A purge is not necessary unless the baby has fever, and this is uncommon. All sugar should be omitted from the milk modification, and the solution boiled for three minutes. One teaspoonful of compound chalk mixture should be added to each bottle. Usually after twelve or twenty-four hours of this feeding the stools will return to normal, when sugar can be added gradually, and in two or three days the baby will be back on his regular modification.

II. TREATMENT IN THE MORE SEVERE CASES

Groups 2 and 3 may be considered together in the discussion of treatment.

1. *Purgation.*—It is a mistake to give a purge as a routine in every diarrheal disease. If there is any harmful material in the intestine which is not coming out as fast as it should, a purge ought to be given—otherwise not. It is not rational to purge a baby who is already having a great many loose stools a day and whose intestine is emptying itself of toxic material as fast as it possibly can. In such cases castor oil or calomel adds insult to injury. On the other hand, a baby who is seen at the onset, who has fever, and who has not as yet been emptied by diarrhea ought to be purged at once, and it is often striking to see how the temperature will drop and how much more comfortable the baby will be after a good cleaning out.

2. *Feeding.*—This is the most important part of the treatment, and it is in this that mistakes are most frequently made. After the initial purge the baby should be deprived of food for about twelve hours, being offered nothing but weak barley water. Many babies will take this readily when they will not take plain water. The object of the starvation is to empty the intestine as completely as possible and to discourage the further increase of bacteria by offering them no food on which to grow. The principles of feeding are the same in every severe case of sugar fermentation; the details may have to be modified according to circumstances.

The condition we are dealing with is caused by an excess of acid in the intestine from the fermentation of sugar by some organism or group of organisms which thrive on sugar. Such organisms are likely to be greatly diminished or to die out if their principal food supply is withdrawn. Therefore, the great principle in treatment is to offer a food which contains very little sugar, and a considerable amount of protein, for as a rule the organisms that thrive on sugar do not thrive on protein. Such a food can be prepared in a number of ways, depending largely on the resources of the people one is dealing with.

a. Albumin Milk.—This, or a modification of it, is the ideal food, and babies with sugar fermentation do better on it, I believe, than on any other. It is too difficult of preparation to be used among the ignorant, but an intelligent mother can make it satisfactorily. There have been numerous modifications of albumin milk, but the original preparation is probably as satisfactory as any. It is made by rubbing the curds from a quart of milk (prepared with essence of pepsin) through a fine sieve several times until they are in a finely divided condition. These curds are then mixed with a pint of buttermilk diluted with a pint of water. The resulting mixture contains fat 2.5 per cent., sugar 1.5 per cent., protein 3.5 per cent. Such a mixture as this offers practically no sugar for the sugar-splitting bacteria to grow on, and on account of its high protein content, it tends to make an alkaline intestine; in an alkaline intestine calcium soaps tend to be formed, which favor the formation of pasty, semi solid stools. The albumin milk should be fed in very small doses at first—perhaps one fourth as much albumin milk as the usual amount of milk the baby would take, with the balance made up of water. If it is borne well, the amount may be rapidly increased. As the baby improves and as the bowel discharges become less frequent, small amounts of sugar may be gradually added. The best sugar to use is some maltose-dextrin preparation, as it ferments less readily than lactose does. Albumin milk is only a temporary food and should not be continued longer than a few weeks.

In a large city where there is a milk laboratory it is usually simpler to have the milk prepared at the laboratory from cream, water and precipitated casein, as any amount of casein or of fat desired can be obtained in this way, thus better suiting the preparation to the digestion of the individual baby than when a stock formula is used.

b. Skim-Milk with Powdered Casein.—Another satisfactory feeding is with simple dilutions of skim-milk to which powdered casein has been added. There was until a year or two ago a product on the market which was a semisoluble calcium caseinate. It could be very readily mixed with skim-milk and water to form a gruel, and in this way it was possible to secure very low sugar percentages in combination with a high protein. In the summer of 1915 I fed a good many outpatients by this method, and got very good results, fully as good, I believe, as could have been obtained with the more complicated albumin milk. The chief advantage of the powdered casein method is its extreme simplicity. Since the war this preparation has been unobtainable, and, so far as I know, no other has been put on the market to take its place. There is an urgent need for such a preparation, and it is a pity to see so many worthless proprietary foods on the market when powdered casein, which is really of great use, could be made so easily by almost any one of the proprietary food companies.

c. Lactic Acid Milk.—In some cases lactic acid milk or buttermilk feeding may be of value, the idea being that the lactic acid organisms of the buttermilk flourish in the intestine and supplant the organisms that are doing the damage. Buttermilk, also, is not very rich in sugar and contains a good deal of protein in an easily assimilable form. Unless fresh buttermilk can be obtained, it is best prepared at home, from skim-milk and cultures or tablets containing the lactic acid or Bulgarian bacillus. If it is desired to use the lactic acid principle, that is, flooding the intestine with lactic acid bacilli, it is a great deal better to use a lactic acid milk, than tablets or vials of the culture, as infinitely more bacteria can be given in the first way than in the second. It is worth while, however, if the baby will not take sour milk, to try the liquid cultures or the tablets. This plan of feeding is used a great deal. Some experienced pediatricians use the butter-milk principle constantly, some consider it of no value. As far as I know, there is no very good evidence one way or the other; some patients it helps, some it helps not at all, and it is time some one did some experimental work on the subject, for what little we really know about it has been handed down from the days of Metschnikoff, who first elaborated the idea.

d. Skim-Milk Dilutions.—The way most of us in the outpatient department of the Children's Hospital treat sugar fermentation is with skim-milk dilutions, usually beginning with a third or a half skim-milk, the rest barley water or water, and gradually increasing as the stools become better. By this method improvement is not so rapid as it is with albumin milk, but in most of the outpatient class of patients or with the ignorant part of one's private practice, complicated methods of feeding cannot be used, and simplicity is of paramount importance.

MEDICINAL AND OTHER TREATMENT

Colonic Irrigations.—If seen at the onset a high colonic irrigation with physiologic sodium chlorid solution may do a great deal of good by helping to empty the intestine. Later in the course of the disease, it does less good, and indeed is likely to do more harm than good by irritating and disturbing the child.

Water.—Next to the feeding, the free administration of water is of the greatest importance. The baby is losing a large amount of fluid from the body in the watery discharges, and it is vital to the chemistry of the body, for many reasons, that the blood and tissues should not be dehydrated. Therefore, as much water as possible should be given between the feedings, and if it cannot be administered in this way physiologic sodium chlorid solution should be given subcutaneously. Howland and Marriott believe that a large amount of the acidosis that is seen in these cases is caused by retention, owing to anuria, of acid sodium phosphate. Therefore, the free administration of fluid by keeping the kidneys active may prevent this complication or help to combat it when it has developed.

Sodium Bicarbonate.—We know now that a good many children with diarrheal disease die from acidosis. Acidosis is shown particularly by deep, tireless breathing, resembling that of air hunger. If this sign develops, sodium bicarbonate should be given at once, either by mouth, or, if not well borne by mouth, intravenously in the form of a 2 per cent. solution. Certain chemical changes take place in sodium bicarbonate after it has been sterilized, which make it very irritating, if given subcutaneously, so that it is never wise to give it in this way, unless a sterile salt is used, and added to the water *after the water has been boiled.*

Other Drugs.—Compound Chalk Mixture: This is, I believe, of value in many cases, as it helps in neutralizing the irritating acids that have been found in the intestine. The soluble alkalis are useless to give for this purpose as they are probably largely absorbed in the stomach, and never reach the intestine.

Opium: It is sometimes difficult to know whether or not to give opium. It is contraindicated if the bowel movements are very foul and few in number or if there is much evidence of toxemia. It is always contraindicated at the onset of an attack, as it is essential to empty the intestine and not to tie it up. In other cases it is distinctly indicated, and it is not good therapeutics to slavishly follow a set rule and to refuse to give opium in any case of diarrhea, as an experienced practitioner did with whom I saw a patient in consultation last summer. The child had been sick over a week, and was having from twenty to twenty-five loose, watery movements a day, with a great deal of straining and discomfort. She was much exhausted from all this, and still the doctor refused to give the small doses of paregoric I suggested because he "knew that it was always wrong to give opium in any diarrhea." In such a case as this, opium in some form, preferably paregoric, is distinctly indicated, for although diarrhea is undoubtedly a conservative process, it may exhaust the child so much that it does him more harm than good.

Bismuth: This drug is sometimes highly recommended, and again many authors say it is useless. It probably does more good in the true infectious type of diarrhea, when there is actual ulceration of the intestine, than it does in the fermentative type which we are discussing; in those diarrheas due to sugar fermentation, I should much prefer chalk mixture.

Stimulants: Stimulants are often needed, and there is probably none better than brandy or caffein. Epinephrin has been highly recommended by some, but its action is so transitory that its value seems somewhat doubtful, except to tide over a sudden collapse.

PROTEIN FORM OF FERMENTATIVE DIARRHEA

The protein form of fermentative diarrhea is not nearly so common as the carbohydrate form. In this condition the intestinal contents have been infected by bacteria which feed mostly on protein, and the resulting stools are brown and foul instead of being green and acid smelling. The general symptoms are similar to those of the carbohydrate form, but the differentiation of the two offers little difficulty owing to the difference in the stools. The treatment is the same as for the carbohydrate form, with the exception of the feeding. Here a low protein and a fairly high carbohydrate diet is needed. Ordinary milk modifications with low protein and high carbohydrate added in the form of lactose and starch sometimes work very well. This diarrhea is more likely to be caused by organisms introduced from without in bad milk than to any faulty digestion on the part of the baby.

III. INFECTIOUS DIARRHEA

In this disease we are dealing with a true infection of the intestinal mucosa, due to some specific organism, usually the dysentery bacillus, but occasionally the gas bacillus or streptococcus. Combined with infection of the mucosa, there may be also a certain amount of decomposition of the intestinal contents. The condition has been called by many names, but the term "infectious diarrhea" is the best one, as it serves to differentiate it from the fermentative group of diarrheas. Infectious diarrhea may arise in a number of ways, the most common one probably being direct infection of the mucosa by dysentery bacilli taken in per os. Or the process may in many cases start as a fermentative diarrhea, and for the first few days there may be no invasion of the mucosa. Then, if the organisms gain ascendance and are of the right variety, the mucosa is attacked, turning the fermentative diarrhea into one of the true infectious type. Occasionally a mechanical diarrhea, may change into an infectious, owing to the fact that the mechanical irritation of the intestine prepares the way and allows bacteria to invade the injured mucous membrane. There has been much discussion as to the organisms that cause infectious diarrhea, but the consensus of opinion seems to be that most cases are due to the dysentery bacillus. The streptococcus and the *Bacillus aerogenes-capsulatus* are also probably etiologic agents in some cases. Infectious diarrhea is a true epidemic disease, and is spread for the most part in the same way that typhoid fever is spread—by "fingers, food and flies."

In Boston, the epidemic usually starts the middle part of July, continues through August, and in especially hot summers into the first part of September. In the South it starts earlier, the last part of May and the month of June usually being the worst months. Young babies are by no means immune, but more cases of infectious diarrhea are seen in babies over 9 months old than in those under. The reverse is true for fermentative diarrhea. In fermentative diarrhea there is usually no demonstrable pathologic lesion of the intestine; in infectious diarrhea there may be a catarrhal inflammation of the mucosa of the ileum and colon, or innumerable small punched-out ulcers may be seen.

Symptoms.—The onset of infectious diarrhea is varied. It may be very sudden, and I have seen a case start with a convulsion and a temperature of 105, with no diarrheal symptoms until the next day. In most cases the onset is more gradual, however, and is first made known by diarrhea and moderate fever. There will usually be about eight or ten stools a day, but in some cases there may be as many as twenty or thirty. The stools may be very small, and often contain no fecal material, but consist merely of mucus, pus and blood. They are not usually offensive in character, and are more likely to be alkaline than acid in reaction, owing to the large amount of mucin they contain, which is a protein and decomposes rapidly. They practically always contain blood and pus intimately mixed with the mucus.

The condition varies a good deal in its severity; many patients do not have a temperature above 101, do not seem very sick, but still have many typical stools every day. Other patients will have extreme prostration, and may have a high temperature for a week or ten days. Nervous symptoms, such as twitching and retraction of the neck, are not uncommon, and are usually of bad prognostic significance. The body rapidly becomes drained of fluid on account of the diarrhea, and acidosis may develop, as shown by hyperpnea, in much the same way that it does in diarrhea of the fermentative type. In most cases gastric disturbance is not common, but occasionally there may be severe vomiting, which is very hard to deal with.

Diagnosis.—It is rare to have a case of infectious diarrhea without blood and pus in the stools, and for practical purposes this is the best way of distinguishing it from fermentative diarrhea. In the latter condition blood in the stools may be seen, but there is never much of it, and it never lasts for more than a day or two. Macroscopic pus is practically never seen in the stools in cases of fermentative diarrhea.

The temperature curve is also of considerable assistance in diagnosis. It may be high or low in either condition, but in fermentative diarrhea it rapidly drops as soon as the intestine is emptied and proper feeding instituted. In infectious diarrhea, on the other hand, the temperature is likely to continue elevated for several days, in spite of purgation and proper feeding.

Treatment.—The general treatment is the same as that for fermentative diarrhea, which has already been outlined. The principles of feeding, however, are quite different. As regards diet, cases of infectious diarrhea must be divided into two groups, for the feeding in the two groups is radically different. The first group includes cases caused by the dysentery bacillus or, more rarely, by the streptococcus. The second group of cases is caused by the gas bacillus.

As far as the symptoms and gross characteristics of the stools are concerned, it is impossible to tell into which group a given case falls. However, there is a simple stool test (see below) which serves to differentiate these groups. While the stool test is being made, or if for any reason it is not made, the case should be treated as a dysentery case, for this is by far the more common type. The therapeutic test is of some value, although rather haphazard, and if the child does not do well on the dysentery treatment, it should be changed to that for the gas bacillus. It is always best at the onset, however, to test the stools for the gas bacillus, as the test is simple and it gives much valuable information as to the proper feeding.

Technic of Gas Bacillus Test.—A U-shaped fermentation tube and a test tube are filled with concentrated nitric acid, and permitted to stand three minutes, when the nitric acid is poured out. Both tubes are rinsed thoroughly with tap water.

A small bit of stool, about a half teaspoonful of dextrimaltose, and about 15 c.c. of hot tap water are placed in the test tube, and the mixture is boiled vigorously for half a minute. The contents of the test tube are now poured into the fermentation tube, care being taken that it is filled up to the top, and that no air bubbles remain in it. The tube is plugged with flamed cotton, and keep in a warm place for twenty-four hours.

Gas in the top of the tube indicates that the gas bacillus is present, in greater or lesser numbers, depending on the amount of gas formed. If the gas bacillus is present in sufficient numbers to be the etiologic agent of the diarrhea, the tube will probably be "blown out," that is, entirely filled with gas.

Another simple way of testing for the gas bacillus is to plant a portion of stool in half a test tube of boiled milk and incubate twenty-four hours. If the gas bacillus is present the milk will be coagulated, will smell like rancid butter and will be shot full of holes like Swiss cheese.

If the "gas test" is negative, assume that the case is one of dysentery infection, and treat it as such.

FEEDING IN DYSENTERY CASES

The feeding in these cases is based on the fact that when offered protein food the dysentery bacillus grows very readily and produces large amounts of toxin. It does not thrive so well on carbohydrate food, nor does it produce so much or such deadly toxin. Therefore, a baby with dysentery should be fed on a low protein and a high carbohydrate food. This works well in practice, and is probably the most successful feeding known for dysentery patients. A few years ago it was the practice to starve patients with infectious diarrhea, and we used to feed many exclusively on weak barley water or lactose water for a week or ten days. Many of these patients died, probably as much from starvation as from the disease. According to our present ideas, a year old baby with dysentery would be treated about as follows: Following a purge, we give nothing but barley water for twenty-four hours. For the next twenty-four hours we add 8 per cent. lactose to the barley water. After this period a mixture of one fourth boiled skim-milk and three fourths barley water, with 8 per cent. lactose may be started. The skim-milk may be gradually increased each day, as the baby gets better, until he is taking undiluted boiled skim-milk with 8 per cent. lactose added. At about this time he should also be getting three or four tablespoonfuls of barley jelly a day. The skim-milk may be gradually replaced by whole milk, and the sugar should be reduced in quantity. During convalescence, fat should be increased very slowly, as nearly all babies after infectious diarrhea have a very poor fat tolerance. The sugars and starches should be most relied on.

It is quite likely that the baby will not digest all the food that is given him under this regimen, but he will come through the disease in much better condition than if he is starved, as he was in the former method of treatment. Another very successful method of treatment, which is similar in principle, and which has been used at the Floating Hospital in recent years with a good deal of success, is to feed the child on one-half fat-free lactic acid milk, and one half water, with lactose up to 8 per cent., the amount of lactic acid milk being gradually increased, and finally starches and fats being added. This method has the advantage that the lactic acid bacilli in the preparation may thrive to such an extent in the intestine that they will hamper the growth of the dysentery organisms.

The feeding in the "gas cases" is different, and patients with this form of infectious diarrhea always do better on lactic acid milk with a low sugar content than they do with any other feeding. The lactic acid bacillus seems to be directly antagonistic to the gas bacillus, and drives it out of the intestine very quickly. Furthermore, the relatively low carbohydrate and high protein content of lactic acid milk is indicated, as the gas bacillus is an organism which thrives on carbohydrate food, but does poorly on protein. Albumin milk, which has already been discussed, likewise fulfils all the indications for feeding in these cases.

PROPHYLAXIS OF DIARRHEAL DISEASES

No raw fruit or vegetables should be given to children under 5 years of age, and care should be taken that all food ingested be in a finely divided form. Overfeeding should be carefully avoided in hot weather, especially overfeeding with sugar. It is always good practice during a hot spell to dilute the baby's milk one third with water. Overclothing the baby is also to be avoided, and frequent bathing, avoidance of the sun, and providing him with water to drink between his feedings are all important. In the southern part of this country, during the summer, all milk fed to babies, no matter how clean it is, should be boiled. An ounce of orange juice daily will prevent scurvy.

In cooler parts of the country, during the hot weather, all milk should be boiled with the exception of certified milk, which can be given raw; but during very hot, sultry spells this should be boiled also.

There is really no valid argument against using boiled milk in the summer time. The only possible harm it can do is to produce scurvy. But we know that comparatively few babies who are fed on fresh boiled milk develop scurvy, and orange juice is practically certain as a prophylactic. Undoubtedly nature intended babies to have raw milk, but the dangers of unclean raw milk so greatly outweigh those of boiled milk, especially in the summer, that more and more physicians are ordering boiled milk as a routine, and it is the duty of us all to educate the laity as to the dangers of raw milk in hot weather.

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POSTINFLUENZAL PSYCHOSES *

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During the recent epidemic approximately 2,500 cases of influenza were treated in the Walter Reed General Hospital. In 435 of these cases pneumonia either had already developed before admittance to the hospital or was diagnosed here during the course of the influenza. The number of deaths from pneumonia was 226, making the death rate 52 per cent. This includes practically all deaths from influenza and gives a mortality rate of about 9 per cent. for all influenza cases admitted.

Delirium occurring during the height of the disease and clearing with the cessation of fever (fever delirium) was more frequent in the early part of the epidemic when the more severe cases were seen. The features of this delirium were in no way peculiar to influenza, but were such as mark a hallucinatory confusion arising in the course of any infectious disease. Cases of this sort are not considered in this report. Neurasthenic depression frequently persisted for a longer or shorter period after the subsidence of the acute symptoms. When this depression was not sufficiently deep to be considered as constituting a psychosis, and to need special treatment as such, the patient was not transferred to the psychiatric wards.

Of psychotic states persisting after the subsidence of the fever, and requiring special attention, there were only four in the 2,500 cases of influenza. Three of these four cases presented pronounced pneumonic consolidation.

During the epidemic or since, in addition to these four, sixteen cases have been admitted to the psychiatric wards in the causation of which influenza seemed to play a more or less important part. Keeping in mind the tendency to attribute to an influenzal infection everything out of the ordinary that happens during

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or following the epidemic, special care was taken to ascertain as definitely as possible that an influenza did exist or had existed. In our cases this was a comparatively easy matter since the fact of any illness would appear on the soldier's sick report. Recently a few cases have been admitted in which there was a history of influenza a month or more preceding the development of mental symptoms, during which interval the patient was in quite his normal condition. These cases are not considered in the present summary, nor is a case of frank delirium tremens running a typical course (second attack) and with only a vague history of a mild illness preceding it. Nor are definitely organic psychoses, coming to attention first at this time, considered as being due to the effects of influenza.

It is open to question as to how long after an influenzal attack that infection may be considered as an exciting cause in newly developing conditions. Since a new attack may occur within forty-eight hours, and the great majority of influenza patients are entirely well before the end of a month, we have assumed that if a soldier was sufficiently recovered to go back to duty and remain on duty for a month, the toxemia could be considered a thing of the past. Endogenous toxins liberated by the influenzal poison should show some effect before a month. In psychoses developing later than this there would be at least great doubt as to the etiologic importance of the infection. In none of our cases was the interval more than fourteen days.

The present report is intended to include only psychotic disturbances arising during the course of the infection and persisting for some time after convalescence, and those beginning during convalescence. The twenty cases which were selected as meeting these requirements had their onset as follows: During the febrile period: first week, 6; second week, 2; third week (pneumonia), 2; fourth week (pneumonia), 1; total, 11. During convalescence: first week, 5; second week, 4; total, 9. All were in soldiers (except one, a nurse) below 30 years of age, except two, who were 39 and 46 years old, respectively.

These cases fall quite readily into three groups: (1) Manic-depressive Group, eight cases; (2) Infective Psychosis Group, seven cases; (3) Dementia Praecox Group, five cases.

MANIC-DEPRESSIVE GROUP

Considering first the group in which the cases resembled most the manic-depressive picture, we find that three of the eight had their onset during the course of the influenza (fourth, fifth and tenth day) and that five came on during the first ten days of convalescence. In six there was a distinct hereditary factor and in two of these a history of prior attacks. One was mentally deficient. All were of the depressed type (except one nurse), began without disorientation, presented depression more or less deep, retardation, and self-accusatory ideas as the chief clinical features. Hallucinations of hearing occurred in only one and in that did not form an important part of the picture. The manic nurse ran the usual course of a mild mania until transferred at the end of a month to another hospital. Of the seven depressed cases five recovered in less than two months *with complete insight*, one is improving after two and a half months (mentally deficient), and one remains under treatment after four months. The following is a summary of the last mentioned case:

CASE 1.—A soldier, aged 30, whose father died from tuberculosis and mother from diabetes, and some of whose immediate relatives were said to be nervous, gave a history of a definite attack of depression in 1907 which resembled the present trouble. He contracted influenza Sept. 20, 1918, improved after six days, had a recrudescence of his temperature after four days which lasted seven days, at which time he had pulmonary findings suggesting tuberculosis but which later cleared up. Ten days after his fever subsided, about November 17, he became noticeably depressed, and worried about the people at home. He was retarded in thought and action. Two weeks later he was self-accusatory. He then continued without change until March 1, when he became more active but was still depressed. No hallucinations were apparent but he *complained of unpleasant thoughts coming* to his mind and of not being able to get rid of them. He thought a great deal about a skeleton. He worried about early sexual indiscretions. He said that when he was a boy he put his penis in his brother's mouth one night when the latter was asleep and that shortly afterward his brother died of *typhoid fever. He now blames himself for his brother's* death. After a duration of four months he appears more dull and is interested only in his own thoughts. He seems to appreciate that he is not right mentally.

Case 1 seems to form a connecting link with the praecox group. The quite definite history of a prior attack and the absence of hallucinations justify its being included in the manic-depressive group.

INFECTIVE PSYCHOSIS GROUP

In this group are included psychoses arising during the fever (and outlasting it) or at the termination of the fever. In none was there any important hereditary factor so far as could be learned. One case was in a constitutionally inferior individual of the inadequate personality type. One gave a history of a previous nervous attack. The chief symptoms consisted of more or less disorientation, sense falsifications (especially disagreeable voices), the mood was depressed rather than elated and restlessness was not a marked feature. The termination was by early recovery. The onset was on the second, third and fourth days in the uncomplicated cases, and on the twelfth, fourteenth, twenty-first and twenty-eighth days in the cases complicated by pneumonia (one antrum infection). The duration was as follows: Less than one month, two; less than two months, two; less than four months, three. In the four cases of short duration there was mental improvement in step with the physical improvement, and recovery was complete as regards insight, but there was not a clear memory of what had taken place at the height of the psychosis. Case 2 is an example:

CASE 2.—A soldier, aged 19, without known predisposition and no history of a prior attack of nervous or mental trouble, developed influenza, Sept. 30, 1918, the disease running a fairly severe course with bronchopneumonia. October 25, as his pulmonary condition was clearing up but while he was still in a run-down condition, he became depressed and disoriented: It was evident that he heard voices, though the exact content of these could not be ascertained. He accused himself of doing wrong and said that he was to be punished. He gradually improved physically, was less bothered by the accusations that he heard, and by the latter part of December was completely recovered. He appreciated that there had been something wrong with his mind, but he could not recall the details of the beginning and the height of his illness.

In other cases visual hallucinations with fear reaction were a prominent feature. One patient appeared to entirely lack insight on recovery, or at least he would never admit that there had been anything the matter with him. He was constitutionally inferior.

In the three cases of longer duration, four months, there developed after the delirium subsided, symptoms of a precox nature which made the diagnosis for a time uncertain. Summaries of these cases follow:

Case 3.—Student, S. A. T. C., aged 20, with no defective heredity and no history of prior psychotic attacks, developed influenza, Oct. 6, 1918. He was not seriously sick and improved sufficiently to go to work, October 14. Four days later he had a rise in temperature (antrum infection), became delirious, heard voices and saw strange things. November 2 he talked in a rambling way to himself of religious matters. When questioned, his replies were brief and irrelevant. He resisted examination and voided in bed. He was oriented approximately. In a week he grew less agitated and dropped religious subjects. He began having some trouble expressing himself and was decidedly sluggish in thinking and talking. He spent hours writing letters, scratching out and modifying what he had put down. The latter part of December he was in a catatonic state, refused to speak and had to be spoon fed, which condition alternated with unusual activity until February 1, from which time he improved steadily. He recovered, after four months' illness, with insight but with a defective memory for the early part and height of his illness.

Case 4.—A soldier, aged 24, without defective heredity or history of prior attacks, developed influenza, Sept. 24, 1918. On the fourth day of his sickness he began to hallucinate, heard voices say he was going to die, and saw a German digging a trench in which to bury him. He was poorly oriented. He improved quickly, but in the middle of December he still appeared somewhat confused and complained that he was unable to control his thoughts. He was restless, busied himself about nothing, was silly, laughing needlessly. He appreciated that things around him did not make the impression on him that they ordinarily would. There appeared to be a decreased flow of thought without definite blocking. At this time he did not hallucinate. He improved gradually and, Jan. 17, 1919, seemed perfectly well; he appreciated that his mental condition had been abnormal and he could recount many of the strange things that had happened to him.

Case 5.—A soldier, Italian, aged 23, no more emotional than the average of his race, developed influenza, Nov. 18, 1918. The next day he muttered incoherently when spoken to and seemed fearful. For the next six days he was more apprehensive and inaccessible, and had to be forcibly fed, evidently hallucinating. Negativism later became marked, and he lay in bed taking no interest in things around, and would not talk. He was not cleanly in his habits. He soon improved sufficiently to care for himself, but as late as the middle of January was still decidedly peculiar. He worried unnecessarily about his bodily functions, his talk was dissociated and meaningless, answers being often but vaguely related to the question asked. He gradually began to interest himself in things and by March 14 was active, interested, working, and his conduct seemed in all respects correct. He appreciated that he had not been just right, but he attributed his nervousness to the fact that since the influenza his bowels had not been in good condition.

Cases 3, 4 and 5 present sufficient praecox symptoms to connect them quite closely with the next, the dementia precox group.

DEMENTIA PRAECOX GROUP

Five of the cases, by reason of their most marked features, were considered as falling into this group. The onset in two was on the seventh and twenty-first days of the disease. In the three beginning during convalescence the onset was on the eighth day, after a sickness of fourteen days; twelfth day, after a sickness of sixteen days, and the fourteenth day, after a sickness of nine days. The duration at the present time is four, three and one-half, four and one-half, five, and four and one-half months, respectively. In none of the cases did heredity seem to be an important factor, nor was there a history of prior attacks. The onset was rather abrupt with more or less confusion. The mood was distinctly depressed and at times there was considerable apprehension caused by terrifying auditory and visual hallucinations. More or less distinct signs of blocking were present. Within two or three weeks the acute stage had passed and they have since pursued the usual hollow, inadequate course. Their reaction to messages by wireless, ideas of poisoning, accusations of being a German spy, bizarre sexual ideas, and feelings of bodily change is poor. They are now dull, lacking in interest, negativistic and promise to run the usual course of hebephronic dementia precox. In one case catatonic features were marked from the first but without any periods of excitement.

While these cases now seem to be clearly of the praecox type, their onset was not so different from that of the three infective cases that ran a long course (Cases 3, 4 and 5). One of the latter group was first called dementia praecox and one of the dementia praecox group was first called infective psychosis. Recent experience with praecox episodes following a definite adequate cause, as service with the A. E. F., would lead us to be in doubt as to whether in any individual case the condition will be permanent or whether ultimate (apparently) complete recovery might occur.

Considering the cases as a whole, predisposition did not seem to be a very important factor, only nine of the twenty showing defect of some sort either in the family or in the personal history. In only two of the eight manic-depressive cases did the family history seem to be entirely free from defect. Six had a history of nervous or mental trouble in immediate relatives and three of these had defective personal histories. Of the infective group two, these being cases of short duration, presented defective personal histories; heredity did not appear to be an important factor. In the five dementia praecox cases there was nothing in the family or in the personal history that could be considered as predisposing to mental trouble, except that in one case the father had become alcoholic late in life.

While the grouping of the cases may be said to be quite clear, there is distinct evidence of overlapping. Case 2, except for the initial disorientation, might have been considered as belonging to the depressed manic group. Cases 3, 4 and 5 presented praecox symptoms but recovered. The praecox cases in the beginning showed sufficient confusion to make the diagnosis for a time doubtful. In one depressed manic case (Case 1) praecox symptoms are beginning to appear. Disregarding the subdivision into groups and considering the series as a whole, the following gradations may be seen:

Depression; retardation; early recovery.
Depression; hallucinations; retardation; early recovery.
Depression; disorientation; hallucinations; early recovery.
Depression; disorientation; hallucinations; praecox symptoms; late recovery.
Depression; retardation; praecox symptoms; recovery doubtful.
Depression (+—); confusion (+—); hallucinations; praecox symptoms; no recovery.

Less marked than any of these is the simple neurasthenic depression that so frequently follows influenza. This would complete the gradations from a simple depression to a depressed hebephrenic praecox condition. Depression was by far the most common symptom, which seems to differ from the Boston Psychopathic Hospital experience[1] but is in accord with the view usually held.[2]

No individual case in the series presented anything that would mark it as being the result of influenza rather than of some other condition, but the mingling of symptoms resulted in a series that has features that seem to be rather characteristic of the postinfluenzal psychoses as we have seen them here. These features are: A foundation of depression with the superimposition of hallucinatory confusion and finally of schizophrenic symptoms.

SUMMARY

1. In an epidemic of influenza of average severity, occurring in soldiers who were for the most part between the ages of 20 and 30, only four of 2,500 cases treated at Walter Reed General Hospital developed psychoses of a severe type which outlasted the acute disease.
2. Twenty cases of postinfluenzal psychoses have, all told, been treated in the psychiatric wards of this hospital. They fall into three fairly distinct groups: Manic-depressive group, eight cases; infective psychosis group, seven cases; dementia praecox group, five cases.
3. Predisposition as shown by the family or the personal history was only marked in the manic-depressive group.
4. There is a sufficient overlapping of the groups to give, when considered as a series, a gradation from a simple depression to hebephrenic praecox of the depressed type. The chief characteristic of the series is: A foundation of depression on which develops sense falsifications, confusion and schizophrenic symptoms.
5. The occurrence of praecox symptoms is not a sure indication of permanency, but such cases run a longer course and recovery is less likely.
6. The most common symptom was depression. Hallucinations seemed to be entirely absent in seven cases.

Cincinnati Sanitarium, Cincinnati, Ohio.

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[1] Menninger, Karl A.: Psychoses Associated with Influenza, J. A. M. A. **72:** 235 (Jan. 25) 1919.

[2] Jelliffe, Smith Ely: Nervous and Mental Disturbances of Influenza, New York M. J. **108:** 725, 755, 807 (Oct. 26, Nov. 2 and 9) 1918.

Killing the Louse.—The louse is an insect of filth. The greatest problem in the sterilization of clothes is to kill all lice and vermin and all disease germs without injury to the garments, and when to sterilization can be added cleansing then we have the best process of all. The sterilization may be by dry heat, steam, hot water, gas or chemical wash, according to the available supplies. Steam sterilization may be accomplished in an autoclave, a room, a car, a kettle, a barrel or a laundry washing machine, by the use of vacuum or at normal or increased pressure in a closed cylinder, or it may be applied as live or current steam. In the acutoclave or sterilization cylinder the complete process requires half an hour, but it was found recently that in a laundry washing machine cooties and nits can be killed with current steam in fifteen minutes; remove the garments, shake them out and wear them. Current steam does not shrink in fifteen minutes in the laundry wheel. But steam, in whatever form, although effective, does not cleanse the garments. The laundry processes are thoroughly efficient delousing processes and each step in the laundry formula can of itself be so regulated as to kill all lice. If very resistant spore bearing bacilli are suspected of being in the clothes, a live steam sterilization may precede the wash with no injury to the garments.—W. D. Pierce, *J. Econ. Ent.* **12:** 46, 1919.

BLOOD TRANSFUSIONS WITHOUT A CHILL BY THE SYRINGE-CANNULA SYSTEM

TWO HUNDRED AND FOURTEEN CONSECUTIVE CASES

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During the past two or three years, several articles have appeared in the literature presenting one method or another of blood transfusion. In the presentation of such methods, naturally enough, claims of merit were made to justify the method used by the particular writer.

To one who may be inexperienced with blood transfusion, or who may not be familiar with the subject, such claims may be accepted without question. For this reason I deemed it timely to place on record the latest results obtained in transfusion of unmodified blood by the syringe cannula system. I trust future publications on methods of transfusion will refer to this article in making comparisons of methods.

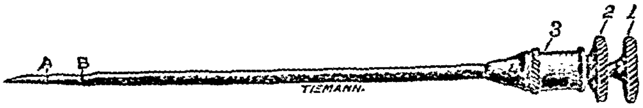

Fig. 1.—*A*, distal end of cannula 2; *B*, distal end of cannula 3.

The method as devised by me,[1] with only slight modifications, is as follows:

The entire apparatus consists of six syringes, two tourniquets, and two sets of cannulas.

CANNULAS

Two sets of cannulas are employed, one for the donor, the other for the recipient (Figs. 1 and 2).

There are three cannulas to each set (Fig. 2 *1, 2 and 3*). Each cannula telescopes within the other as shown in Figure 1.

The innermost cannula is practically a hollow needle, 2 6/16 inches long, 30-gage, with one end ground to a fine point and short bevel. The hollow needle (Fig. 2 *1*) is fitted snugly into Cannula 2. Cannula 2 is 5 mm. shorter than the needle and is fitted snugly into Cannula 3. Cannula 3 is 5 mm. shorter than Cannula 2. The proximal ends of Cannulas 1 and 2 are capped with stationary thumbscrew caps. The proximal end of Cannula 3 is capped with a receiver to fit any Record syringe.

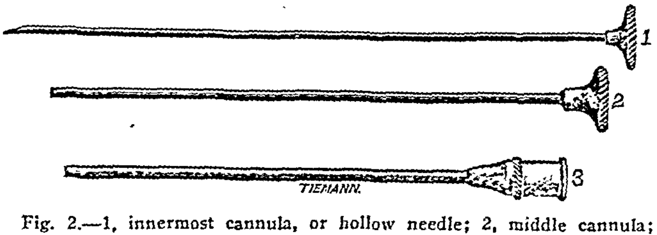

Fig. 2.—1, innermost cannula, or hollow needle; 2, middle cannula; 3, outer cannula.

Cannula 3 is 2 inches long, 14-gage, 0.064 diameter. The caliber of this cannula is the same as the tip of a Record syringe.

In very small infants with very small veins only Cannulas 1 and 2 are employed, Cannula 2 being capped with the receiver to fit the tip of the syringe.

The syringes can be sterilized in 95 per cent. alcohol for a period of ten minutes and then rinsed in physiologic sodium chlorid solution to remove the alcohol.

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[1] Lindeman, E.: Simple Syringe Transfusion with Special Cannulas, Am. J. Dis. Child. **13:** 28 (July) 1913.

OPERATION

The patient and the donor are placed in recumbent posture in parallel position. The skin of the arms is sterilized. A small table is set between the patient and the donor. On this table are placed three basins containing sterile physiologic sodium chlorid solution approximately room temperature, for the washing of syringes. A nurse stands behind the table and washes the syringes by rinsing each syringe in each one of the three basins. As long as the last rinsing basin contains sterile normal salt solution, the other two may contain sterile tap or distilled water or salt solution. A syringe is never used a second time until washed in these basins, hence, no old or residual blood is allowed to enter the patient. These syringes are washed as rapidly as they are used. The third rinsing basin should remain clear throughout the operation.

One operator manages the syringe of the donor, the other operator that of the recipient. A tourniquet is placed on the arm of the patient to distend the vein. A cannula is then inserted into the vein by a skin puncture only.

INSERTION OF CANNULA

When the needle has entered the vein a drop of blood is seen to trickle from the distal end of the innermost cannula. After the first joint *A* has entered the vein, Cannula 1 is withdrawn about one-half inch, thus preventing the vessel wall from being punctured or injured by the needle after the vein is entered.

With the thumb now on the screw-cap of Cannula 2, the cannula is forced further until joint *B* has entered the vein. Cannula 2 is then withdrawn a distance of one-half inch, Cannula 3 alone now coming in contact with the vessel wall. The latter is then gently pushed into the vein to a desirable length, usually from three-quarters to one inch. The tourniquet is then removed.

A cannula is then inserted into the vein of the donor in a similar manner. The tourniquet is placed on the arm sufficiently tight to obstruct the venous return, but not tight enough to impede the arterial flow, and remains on the arm of the donor throughout the operation. Everything is now in readiness for transfusion. There is no need of haste at this stage.

The obturator in the cannula of the donor is removed and an empty syringe is promptly attached and blood is withdrawn as rapidly as possible. When the syringe is filled, the assistant replaces it by an empty syringe, at the same time placing the filled syringe on the table. The operator places his thumb over the mouth of cannula to prevent leakage during change in syringes.

The operator on the recipient picks up the filled syringe, attaches it to the cannula after removing the obturator, and evacuates the contents gently but speedily into the vein. As soon as the contents are evacuated a full syringe is again ready for evacuation. One syringeful of blood follows another in rapid succession until the desired quantity of blood has been transfused.

Small syringes of 20 c.c. capacity are found most satisfactory. Larger sizes are not used because it requires a longer time to fill and empty them. The time elapsing for the filling and emptying of one syringe is from six to ten seconds. It is practically impossible for any chemical or physical change to take place in that short space of time. Since the blood is transplanted in relay fashion, the entire mass of blood, regardless of the amount, is outside the body only so long as it takes to fill and empty one syringeful, namely, from six to ten seconds.

A little of the salt solution is squirted around the cannula occasionally to keep the field clean but none is injected into the vein of the patient.

ADVANTAGES OF THE METHOD

The blood passes through a minimum amount of foreign material. There is no blind system into which air may leak, and there are no rubber tubings, stopcocks or valves around which blood may clot. No anticoagulants and no foreign material are introduced into the patient. Herein lie the merits of this method.

In the method as originally outlined, a little of the salt solution was injected into the vein of the patient from time to time during the operation. This has been found unnecessary and during the past two years has been discontinued.

Before the publication of the syringe-cannula system of blood transfusion, I devised a variety of other methods, such as force-pumps, and gravity-pumps attached to intravenous cannulas by means of rubber tubing. I had also at that time, at the suggestion of Dr. Cyrus W. Field of New York, used sodium citrate to prevent the coagulation of the blood. These were all found inferior and were discarded by me in favor of the syringe-cannula system.

Since the publication of this method I have looked for possibilities for further improvement. I have continued experimenting for simplification, also realizing at the time that many others would attempt this. But I soon learned that further simplification was not attained without the sacrifice of important points of merit in the original method.

ESSENTIAL FACTORS

The important factors essential in the proper transplantation of blood are: (1) The method must be applicable in any case and in any disease. (2) It must be possible to transplant any amount necessary to obtain the most desirable clinical results. (3) The blood must be transplanted exactly as it exists in the donor, namely, in its natural state; to do this, (4) it must pass through a minimum amount of foreign material; (5) it must be out of the body of the donor and into that of the patient in a minimum length of time, and (6) it must be free of reactions.

REACTIONS

There are at least four causes for reactions to be recognized in blood transfusion: (1) hemolysis and agglutination; (2) toxic substances developed in the blood on remaining outside of the body; (3) chemicals such as anticoagulants and physiologic sodium chlorid solution, and (4) sensitization and anaphylaxis.

In the first 150 transfusions performed by me by the syringe-cannula system, a record of which has been published,[2] 33 per cent. were followed by chills and fever. In that series the preliminary hemolytic tests were made by many serologists in many parts of the country. At that time serologists, generally, were unfamiliar with these tests and the work was done rather crudely. The question I naturally asked myself was, Was the cause of these chills due to the method or was it due to inaccurate laboratory work in the selection of donors?

I then set myself to the task of supervising all hemolytic tests myself in order to rule out variations in the personal equation of laboratory workers.

I then published reports[3] on a series of 155 transfusions by the syringe-cannula system. Of this series the blood tests were personally supervised by me in 146 transfusions. Nine per cent. of these were followed by chills. In all, 136,800 c.c. of blood were transfused without a death referable to transfusion.

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[2] Lindeman, E.: Blood-Transfusion: Report on One Hundred and Thirty-Five Transfusions by the Syringe-Cannula Method, J. A. M. A. **62**: 993 (March 28) 1914.

[3] Lindeman, E.: Reactions Following Blood Transfusion by the Syringe Cannula System, J. A. M. A. **66**: 624 (Feb. 26) 1916.

Adults received from 1,000 to 1,800 c.c. of blood in each operation.

I was much impressed by this marked improvement in the results obtained and concluded that chills in blood transfusion by the syringe-cannula system were the result of slight grades of hemolysis due to poor choice of a donor. Incidentally the technic was improved, so that it was no longer necessary to inject salt solution into the patient and the 9 per cent. of chills were eliminated. The last series cited in the tables comprises 214 consecutive transfusions without a chill.

TABLE 1.—BLOOD TRANSFUSIONS IN THIRTY-ONE CASES OF PERNICIOUS ANEMIA

Rise of Temp.	Amount of Blood Transfused 1,000 C.c.	1,100 C.c.	1,200 C.c.	1,300 C.c.	1,400 C.c.	1,500 C.c.	1,600 C.c.	1,700 C.c.	1,800 C.c.	2,000 C.c.	2,200 C.c.	Total Transfusions
No rise....	..	..	..	1	1	3	..	..	..	..	..	5
1 or less...	..	2	1	1	2	2	2	..	..	..	..	10
Under 2...	3	6	6	9	7	10	7	..	..	..	1	49
2 to 3......	1	3	4	3	8	2	2	..	..	1	..	24
3 to 4......	..	2	3	..	1	3	1	..	1	..	..	11
4 to 5......	..	1	1	..	2	..	1	1	..	..	..	6
5 to 6......	..	..	..	..	..	1	2	..	..	..	..	3
Totals..	4	14	15	14	21	21	15	1	1	1	1	108

In order to make this demonstration obvious, transfusions of less than 1,000 c.c. are omitted in this series, and the sequence is disturbed by the absence of citation of cases receiving smaller amounts. The amounts transfused are shown in the accompanying tables. The tables represent two hundred and fourteen transfusions, in which 270,400 c.c. of blood were transfused.

The posttransfusion temperature is more often somewhat higher when amounts are transfused above 1,400 c.c. Some transfusions of large amounts show less rise of temperature than other transfusions of lesser amount. The rise of temperature usually begins from two to four hours after transfusion and begins to decline from four to eight hours afterward. In three cases a rise of temperature of from 5 to 6 degrees continued during a period of twenty-four hours after transfusion and then declined gradually until normal was reached three days later. One case had a delayed rise of temperature beginning almost twenty-four hours after transfusion and continuing for two days. During the period of fever of 3 degrees or more, patients will sometimes have a feeling of malaise and lack of appetite; at other times, exhilaration, restlessness and sleeplessness. When the temperature reaches normal, the full benefit of the transfusion is felt as a rule, and any symptoms incident to the procedure disappear. A transitory urticaria occasionally occurs but is apparently of little consequence. A transfusion at one time may be followed by an urticaria, yet at another time it may be absent in the same patient.

In four instances bronchospasm occurred, in two instances following the first transfusion, once in a case of leprosy and once in a patient who was asthmatic. The third instance occurred after the patient received his fifteenth transfusion, when 1,600 c.c. were transfused. The fourth instance occurred after the fourteenth transfusion, in which 1,500 c.c. were transfused. All of these cases were followed by only moderate rise of temperature and no chills. The third patient received three transfusions subsequent to his attack, with one recurrence and then only to a lesser degree. The fourth patient has had five transfusions since his attack of bronchospasm, without recurrence.

Of the 214 transfusions, there were 108 in pernicious anemia (Table 1). On some of these patients transfusion was performed from fifteen to twenty times. There was in 18.5 per cent. a posttransfusion rise of temperature of 3 degrees or more. The patient receiving 2,200 c.c. had a rise of less than 2 degrees and returned to his home, about 150 miles distant, thirty-six hours after receiving the transfusion, feeling well. There were twenty-six transfusions in cases of hemorrhage (Table 2). There was a rise of temperature of 3 degrees or more in 12 per cent. of these cases. One patient receiving 2,000 c.c. had a rise of temperature of less than 3 degrees. There were eighty transfusions in the miscellaneous group (Table 3). Of these 12.5 per cent. had a rise of temperature of 3 degrees or more.

The number of transfusions in the two latter groups (Tables 2 and 3) combined is the same as in the pernicious anemia group (Table 1), yet the pernicious anemia group shows a somewhat higher percentage of instances of posttransfusion temperature of 3 degrees or more. It should be noted that in the pernicious anemia group there were a greater number of instances in which patients received larger amounts of blood. I am inclined to believe that the larger amounts rather than the disease is responsible for the small increase in percentage. It is seen by the tables that by the syringe-cannula system blood may be transplanted with very near approach to the ideal. It may be transfused in any quantity and the very disagreeable and undesirable reactions many times following transfusion may be avoided.

RESULTS IN CITRATE METHOD

Recently the use of sodium citrate has come into favor of some. One need only refer to such articles as Novy and DeKruif,[4] Drinker and Brittingham[5] and the work of Clowes,[6] to appreciate the inferiority of the citrate method in comparison with that of unmodified blood. Even some of its most ardent supporters recognize the frequency of chills after citrate transfusion. At the outset attention should be called to the fact that in blood transfusion by the syringe-cannula system a given mass of blood is out of the body of the donor and into the patient before the same mass of blood by the citrate method even reaches the citrate solution.

TABLE 2.—BLOOD TRANSFUSIONS IN FOURTEEN CASES OF HEMORRHAGE

Rise of Temp.	Amount of Blood Transfused 1,000 C.c.	1,100 C.c.	1,200 C.c.	1,300 C.c.	1,400 C.c.	1,500 C.c.	1,600 C.c.	1,700 C.c.	1,800 C.c.	2,000 C.c.	2,200 C.c.	Total Transfusions
No rise....	..	1	5	..	1	..	..	..	..	..	..	7
1 or less...	..	1	1	1	1	..	1	..	..	..	..	5
Under 2...	1	2	..	..	..	..	..	..	..	..	..	3
2 to 3......	2	1	1	1	1	1	..	..	..	1	..	8
3 to 4......	..	1	..	..	1	..	..	..	..	..	..	2
5 to 6......	..	..	..	..	..	1	..	..	..	..	..	1
Totals..	3	6	7	2	4	2	1	..	..	1	..	26

Drinker and Brittingham[5] showed that when they introduced into a patient citrated blood from which the platelets had been separated, the percentage of chills was less than when the citrated blood with platelets was introduced. When they isolated the platelets from citrated blood and introduced them into a patient they produced reactions. They conclude that when blood is citrated the platelets undergo some change and that this change in the platelets is responsible in a measure for the chills. They also demonstrated that mere addition of sodium citrate to red cell suspension increases the susceptibility to chills and these red cells also hemolyze more readily.

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[4] Novy, F. G., and DeKruif, P. H.: Anaphylatoxin and Anaphylaxis, J. A. M. A. **68**: 1524 (May 26) 1917.

[5] Drinker, C. K., and Brittingham, A. H.: The Cause of the Reaction Following Transfusion of Citrated Blood, Arch. Int. Med. **23**: 133 (Feb.) 1919.

[6] Clowes, G. H. A.: J. Phys. Chem. **20**: 407, 1916.

Clowes[6] has called attention to the similarity of sodium chlorid and sodium citrate and to their general effects on protoplasm. He showed that the difference between the salts is a function of the anion, and citrate is infinitely more toxic than the chlorid, no matter what the test material.

The clinical results of a single injection of sodium citrate into the circulation of an individual is by no means any proof of its harmlessness when added to blood outside of the body. In the first place, while injecting such citrate it is possible for the bodily mechanism to neutralize or convert it before any injury has been done to the blood itself. Secondly, when such chemicals are added to so labile a substance as blood and the blood is allowed to stand outside the body for from twenty minutes to one hour or several hours, a wholly different set of circumstances pertain.

TABLE 3.—BLOOD TRANSFUSIONS IN MISCELLANEOUS CASES

		Amunts Transfused						Temperature Rise, Degrees					
Disease	Cases	1,000 C.c.	1,100 C.c.	1,200 C.c.	1,300 C.c.	1,400 C.c.	No. of Transfusions	No Rise	1 or Less	Under 2	2 to 3	3 to 4	4 to 5
Secondary anemia	8	..	5	5	1	..	11	1	1	3	2	3	1
Typhoid hemorrhage	1	..	..	1	..	..	1	..	1	..	..	..	..
Septicemia and anemia	2	..	..	1	..	..	3	2	1	..	..	..	..
Sepsis	5	3	4	1	..	..	8	1	3	..	4	..	..
Carcinoma and anemia	9	1	1	4	2	1	9	2	2	..	5	..	..
Carcinomatosis and anemia	2	..	..	1	1	..	2	1	..	..	..	..	1
Subacute nephritis and anemia	4	1	1	2	..	..	4	2	1	..	1	..	..
Tropical sprue and anemia	4	..	3	4	1	1	9	1	..	1	5	1	1
Abscessed liver	2	1	2	1	..	..	4	1	1	1	1	..	..
Postoperative gallbladder and hemorrhage	2	1	2	1	..	..	4	3	..	..	1	..	..
Banti's disease	3	1	2	1	..	2	6	2	..	1	3	..	..
Hemophilia	1	1	..	..	..	..	1	..	..	1	..	..	..
Cirrhosis of liver	1	..	1	..	..	..	1	..	..	..	1	..	..
Acquired hemolytic jaundice	1	..	1	..	..	..	1	1	..	..	..	..	..
Aleukemic leukemia	3	2	4	3	..	..	9	1	6	..	1	1	..
Acute pancreatitis	1	1	1	..	..	..	2	..	..	1	1	..	..
Pyloric stenosis	1	..	..	1	..	..	1	..	..	..	1	..	..
Tuberculosis	1	1	..	..	..	..	1	1	..	..	..	..	..
Leprosy	2	..	2	1	..	..	3	..	..	..	1	2	..
Totals	45	15	29	27	5	4	80	19	16	8	27	7	3

It may be here worth while quoting Novy and DeKruif[4] on the explanation of the production of anaphylatoxin. They believe the matrix of the poison anaphylatoxin is in the plasma and the serum. They say:

> The disturbance which brings about the transformation of the matrix into poison is readily affected by the addition of almost any alien substance to a serum. Thus bacteria, cells, organ extract, peptone, agar, starch, silicic acid, barium sulphate, diverse salts, even distilled water act as inducers or accelerators of this action. As to the mode of action of these substances, nothing definite can be said, but it is probable that a dispersion of the matrix precedes a tautomeric change.

Novy and DeKruif also showed that toxic substances develop in blood on standing for a period of three minutes. The reaction to this toxicity would be a mass reaction and would vary with the quantity introduced. A given patient may escape a severe reaction on a small quantity of citrated blood, say 500 or 600 c.c., but in many instances he would suffer a severe reaction if given a larger amount. The quantity of blood, therefore, that it is desirable or possible to introduce by the citrate method is necessarily limited to small amounts in order to remain within the limits of reasonable safety. Naturally sponsors for the citrate method would advocate a small transfusion in any condition regardless of the specific clinical demand because only small transfusions are possible by the citrate method.

It is therefore unfair to make comparisons of the incidence of chills following transfusions of citrated blood and those following transfusions with unmodified blood unless the amount transfused is taken into account. If comparisons are made in cases in which from 1,000 to 1,200 c.c. or more are transfused, the incidence of chills by the citrate method is very high and may be followed by death, and that by the syringe-cannula system, as shown by the tables, is absent.

The conclusion must follow that citrate of soda must produce changes in the blood, or allow by its use changes in the blood to develop, which produce chills and severe reactions. Furthermore, the inferiority of citrate transfusion is not only expressed by the incidence of chills and by the limitations of the amount it is possible to introduce into a given patient with safety, but is also expressed in the danger to patients of sensitization for subsequent transfusions, by the introduction of toxic substances into the patient. Toxic substances may produce chills and fever, and they may also cause sensitization. The subsequent introduction of toxic substances may produce bronchospasm, angioneurotic edema. The latter may become general and be followed by death. I have seen angioneurotic edema follow in two cases in patients who had previously received citrate transfusions, but in no instance has it followed in any case in which I transfused unmodified blood by the syringe-cannula system.

REPEATED TRANSFUSIONS

In diseases in which repeated transfusions are necessary, each transfusion should be done as nearly perfectly as possible to avoid disturbance of the labile elements in the blood and to avoid the sensitization of a patient to subsequent transfusions.

When one reflects on this subject and realizes the many factors that are involved in blood transfusion, namely, blood coagulation, platelet change, susceptibility of red blood cells to hemolysis, the danger of alien substances producing anaphylatoxin, anaphylaxis, tautomeric changes, the effect of chemical substances on the immunologic properties of blood, etc., it might impress itself on some that it would be worth while before doing transfusion work to pause a moment in reflection on the best method for the transplantation of blood.

When one does such work only occasionally or rarely, the less one does of it, the better for the patient, and any method which meets the inexperience or limited technic of the operator is advisable. But when such work is done frequently, the operator should be encouraged to train himself to become equal to the best method that will make possible the closest approach to perfect transplantation. To do this I believe the method must embody the following qualifications: (1) The blood must be out of the body a minimum length of time; (2) it must pass through a minimum amount of foreign material; (3) anticoagulants must be avoided; (4) no foreign material, not even physiologic sodium chlorid solution, should be introduced; (5) it must be applicable in any case and in any disease, and (6) it must be possible to transfuse in any amount with a minimum reaction.

Blood transfusion is a life-saving measure and one that will frequently yield brilliant results in the hands of the skilled and failure in the hands of the inexperienced. It is especially in diseases other than hemorrhage, when there is much disease for the patient to overcome after he has received the most effective transfusion obtainable, that work of high excellence is of paramount importance.

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PREGNANCY COMPLICATED BY EPIDEMIC INFLUENZA

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Influenza and pneumonia are, without any question, extremely grave complications of the pregnant state. Until the recent outbreak of epidemic influenza, however, there seems to have been either little opportunity or no great effort to study any number of such cases appearing in groups in which the infective organism, seasonal conditions and general treatment were similar. Following the epidemic of 1889-1890 a few articles appeared in various European journals, but the opinions and findings of the different writers were not especially convincing nor were they by any means uniform. Most of the articles were published long after the epidemic was past and interest had died down, so that they were merely of historical value and the lesson in them was lost. Consequently, with the outbreak of the recent epidemic we were quite unprepared for the appalling loss of life among pregnant women affected by this disease. Hintze,[1] Vinay,[2] Ballantyne,[3] and Amann[4] studied the effects of the epidemic of 1889-1890 and published their results, but for the most part their conclusions were inconclusive, while a review of their work leaves many points unexplained and considerable doubt as to just what course should be pursued in the care and treatment of any given patient or number of patients.

RELATION OF PNEUMONIA TO EPIDEMIC INFLUENZA

We have made an analysis of fifty cases of pregnancy complicated by epidemic influenza and believe the study to be of value, not only from the standpoint of interest in the present epidemic, but also in its relation to ordinary pneumonia during pregnancy. The generally accepted idea regarding this disease has been followed in that we have made no attempt to differentiate between those cases which did and those which did not show pneumonic lesions, classifying them all under the heading of epidemic influenza. Clearly many of the lessons to be learned from this epidemic can be applied to the more usual types of pneumonia. That there is a need for such application is demonstrated by the discussion of the recent work of Bland[5] on such a self-evident point as the effect of abortion or premature labor on the course of the disease. Bland showed that 75.5 per cent. of the women in whom the disease was fatal died after their pregnancy was interrupted, but Arnold,[6] in discussing his paper, stated that abortion or miscarriage was not to be feared but welcomed, and considered artificial termination of pregnancy advisable in order to lessen the toxemia of the patient. Farrar[7] and Kosmak[8] both believe that abortion has little or no influence on the course of the disease, although Kosmak thinks that induction of labor should not be undertaken, because labor at this time is simply an added burden for the patient to carry.

In our series, several peculiar features stand out with especial prominence, and we wish to emphasize these, at the same time endeavoring to explain them, hoping that something of value in the way of treatment may be gained thereby. It was evident from the outset that it was a serious matter for a pregnant woman to develop epidemic influenza; it soon was learned that a large proportion of these women miscarried, or fell into labor, prematurely or otherwise, as a direct result of the infection, and the mortality, high enough without this occurrence, was thereby increased to a shocking degree. We have known this more or less vaguely from the usually tragic course of pneumonia during pregnancy as seen in routine practice. The epidemic of influenza, however, acted like a veritable plague, carrying off pregnant women as it did no other class of people.

EFFECT OF INFLUENZA ON PREGNANT WOMEN

Among the fifty patients, an interruption of pregnancy as a direct result of the infection took place in twenty-one, or 42 per cent. Seventeen of these women died, and only four recovered. This is a mortality of 80.9 per cent. in case the patient delivers herself or miscarries, and may be compared to the incidence of death in the group of twenty-nine women whose pregnancy was undisturbed. Fourteen, or 48.2 per cent. of these died undelivered, whereas the remaining 51.8 per cent. recovered without any apparent effect on their pregnancy.

In recapitulation, our figures may be expressed in three ways, namely, 48.2 per cent. mortality resulted

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1. Hintze: Diskussion über den Einfluss der Influenza auf Schwangere, Zentralbl. f. Gynäk. **51**, 1896.
2. Vinay: De l'influenza chez les femmes en état de puerpéralité, Lyon méd. **69**: 247, 1892.
3. Ballantyne: The Relation of Influenza to Obstetrical Cases, Obst. Tr., Edinborough **19**: 33, 1894.
4. Amann: Studien über Influenza bei Schwangeren, München. med. Wchnschr. **37**: 162, 1890.
5. Bland: Influenza in Its Relation to Pregnancy and Labor, Am. J. Obst. **79**: 184, 1919.
6. Arnold: Discussion, Am. J. Obst. **79**: 304, 1919.
7. Farrar: The Visitations of Influenza and Its Influence on Gynecologic and Obstetric Conditions, Am. J. Obst. **79**: 229, 1919.
8. Kosmak: The Occurrence of Epidemic Influenza in Pregnancy, Am. J. Obst. **79**: 238, 1919.

under the best possible circumstances, that is, without disturbance of the pregnancy; 80.9 per cent. if the disease interrupts the pregnancy, or an average risk to a pregnant woman from epidemic influenza of 62 per cent. (thirty-one deaths among fifty patients).

During the epidemic 950 patients with influenza were admitted to the Western Pennsylvania Hospital of Pittsburgh. The mortality among these patients was 22.31 per cent., which is somewhat lower than that reported by Keeton and Cushman[9] of the Cook County Hospital in Chicago, where there was a death rate of 39.3 per cent. among 1,735 patients. Although their total mortality was higher than that of the Western Pennsylvania Hospital, the death rate among pregnant women in the same institution was lower than ours. This was reported by Woolston and Conley[10] as being 51.4 per cent.

In studying the total mortality at the Western Pennsylvania Hospital, it was noted that the incidence of death was higher (24.84 per cent.) among nonpregnant women than among men (19.1 per cent), but the 62 per cent. death rate among pregnant women is still two and one-half times greater than that of other women.

Table 2 demonstrates the facts already stated, that a pregnant woman who contracts epidemic influenza is liable to have her pregnancy interrupted by the disease, and that if this does happen her chances for recovery are seriously impaired.

TABLE 1.—MORTALITY IN INFLUENZA *

	Mortality at West. Penn. Hospital, Per Cent.	Mortality at Cook County Hospital, Per Cent.
All cases	22.31	39.3
Pregnant women	62.0	51.4

* A few of our cases occurred in the obstetric service (Dr. Titus) of the St. Margaret Hospital, Pittsburgh. The treatment having been identical, they are included.

EXPLANATION OF INTERRUPTION OF PREGNANCY AND ITS EFFECT

In seeking an explanation of these two points, observers have advanced several theories. Woolston and Conley[10] believe that the toxemia which exists is largely responsible for the frequency with which pregnancy is interrupted, and refer to the lack of proper oxygenation of the blood as a causative factor. They note that a very great majority of abortions or premature labors occurred within twenty-four hours of death, at which time patients were extremely toxic, and reason therefore that the imminence of death is a cause rather than an effect of the abortion or premature labor. We do not quite agree with this, because we believe that the toxemia acts entirely in an indirect way in interrupting a pregnancy, and that death is hastened by this occurrence.

Among our patients, fourteen women died undelivered, all necessarily "toxic," as compared to seventeen, only three more, who aborted or delivered and then died. Toxemia should be considered only as a factor in the production of uterine contractions, else there would have been more deliveries among the fatal cases. At least the term is too general and its use does not explain the manner in which a toxemia actually affects pregnancy. Every one is familiar with certain ordinary toxemias of pregnancy, none of which cause premature labor, except indirectly. For instance, preeclamptic toxemia seldom causes labor to begin unless the fetus dies. Many women commence to have labor pains during a series of eclamptic convulsions, but that is due in all likelihood to the violence of the convulsive seizures in conjunction with the death of the fetus, which thus becomes a foreign body within the uterus. Toxemia alone, therefore, cannot be said to produce premature labor.

TABLE 2.—INTERRUPTION OF PREGNANCY AND RESULTS

		Month of Pregnancy									Mortality Per Cent.
		2	3	4	5	6	7	8	9	Total	
Recovered	Interrupted	0	1	0	0	0	0	0	3	4	....
	Uninterrupted	0	0	2	2	3	4	3	1	15	....
Died	Interrupted	0	0	2	1	5	1	1	7	17	80.9
	Uninterrupted	1	0	1	3	3	4	0	2	14	48.2
Total		1	1	5	6	11	9	4	13	50	62.0

It naturally requires little impulse, in a comparative way, to start a woman near term into labor, and if one accepts the theory of Brown-Séquard[11] that an excess of carbon dioxid and a lack of oxygen in the blood leads to energetic uterine contractions, we have a ready explanation of the labors at or near maturity. Nine babies from these labors survived; one died. There seemed to be a tendency, however, for pregnancy to be interrupted no matter what the period of gestation (Table 2). In the earlier months, something more is required, and it seemed logical to conclude that here was a combination of factors, such as deoxygenation of the blood, and increase in carbon dioxid to such a degree that it and the toxemia of the mother brought about the death of the fetus, which immediately acts as a foreign body within the uterus and, setting up contractions, is presently extruded.

The fact that Table 3 shows that ten of eleven premature infants were born dead, as compared to only one baby in ten at full term, would indicate that it is almost necessary to kill the fetus by deoxygenation and toxemia in order to interrupt the gestation in the earlier months.

TABLE 3.—CONDITION OF INFANTS

	At or Near Term	Premature
Born alive	9	1
Died	0	1 (22 hrs.)
Survived	9	0
Born dead	1	10
Recent	1	8
Macerated	0	2

This idea is further borne out by the fact that most of the patients who had premature labors or miscarriages induced by the infection died within from twelve to twenty-four hours after delivery (average time approximately twenty hours), whereas following labor at or near full term death occurred at any time from two to twenty-one days (average time eight days). Evidently, therefore, a patient must be more seriously ill to start a miscarriage than to start labor at term. We reason thus because death followed more promptly in that group of cases in which the actual amount of work and shock incident to labor naturally would be least. In fact, the abortions, miscarriages and the earliest of the premature labors were apparently easy for the patient. Of course, many of the women were so toxic that they may have been indifferent to the pain.

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[9] Keeton, R. W., and Cushman, A. Beulah: The Influenza Epidemic in Chicago, J. A. M. A. **71**: 1962 (Dec. 14) 1918.

[10] Woolston, W. J., and Conley, D. O.: Epidemic Pneumonia in Pregnancy, J. A. M. A. **71**: 1898 (Dec. 7) 1918.

[11] Brown-Séquard: Experimental Researches Applied to Physiology and Pathology, 1853, p. 117, quoted by Williams: Obstetrics, 1917, p. 237.

EFFECT OF INTERRUPTION OF PREGNANCY

Interruption of pregnancy at any period is serious, but it is less serious at term, because less toxemia and deoxygenation of the blood is required in order to bring on labor at this time. Because this patient is not necessarily so seriously ill as one of the other group, her chances for recovery should be slightly better. Table 2 shows this to be true. It will be noted that ten patients delivered before the ninth month died, while only one recovered; whereas only seven died following delivery at term, while three recovered. Just why so many as fourteen women died undelivered can be explained only by saying that in them the disease advanced so rapidly that it outstripped the more laborious process of the induction of abortion or labor. By this we mean literally that it is a time-consuming process to get ready for even the beginning of a labor or abortion to say nothing of the time which is later involved in the completion of the labor after it is once begun. Labor had begun in only one of the fourteen patients who died undelivered.

The next question which arose was why the mortality should be so great and death so sudden when an interruption of pregnancy takes place. As pointed out above, the 48.2 per cent. mortality in pregnant women is increased to 80.9 per cent. by the mere occurrence of a miscarriage or an easy labor. We have argued, it is true, that the more seriously ill a woman is the more likely, as a result of this, is she to have her pregnancy interrupted, and this might appear to dispose of the question. That would be so were it not a matter of comparison. The more profoundly sick a woman is, the more certainly and the sooner will she miscarry or go into labor; but no matter how light any given woman's illness might be, if she has her pregnancy interrupted by the disease the outlook for her immediately becomes more grave. We had gained the impression, later borne out by our figures, that of two women equally ill, the one whose pregnancy remained undisturbed possessed a likelihood of recovery several times as great as that of the woman whose pregnancy was interrupted. This impression was due to the fact that practically all of the former who died were seriously ill on admission to the hospital, whereas many of those in the latter group seemed to be in fairly good condition until the moment when their pregnancy came to an end. From that instant their general condition became steadily and rapidly worse. The internist in consultation in several of the latter cases gave the opinion that "there was not enough pneumonia present to kill this woman," or "from a medical standpoint her condition was quite good." Almost invariably, however, the ending of their pregnancy was marked by a distinct change for the worse, usually followed by death.

The explanation of this seems to be that labor or even miscarriage is accompanied by a certain amount of shock, and on delivery there is a sudden lowering of intra-abdominal pressure, especially if pregnancy is at all advanced. The muscular effort of labor increases the carbon dioxid content of the blood, already overloaded through the deficiencies of the respiratory tract; the myocardium is weakened by the disease, then strained by the muscular exertion of labor, after which blood pressure is suddenly reduced by the cessation of labor and the hemorrhage accompanying delivery.

This matter of hemorrhage is probably a most important factor. Venesection, while theoretically advisable in ordinary pneumonia, has been shown to be actually harmful to patients with epidemic influenza. The cyanosis of these patients is more a dusky pallor than a blueness. Circulation is undoubtedly impaired, and we found that the lower the blood pressure the worse the prognosis. Patients who recovered maintained a fair blood pressure, whereas those who died either started out with or soon developed a low blood pressure. As patients began to recover blood pressure increased. Venesection in these cases is illogical, therefore, and the loss of blood accompanying delivery or miscarriage undoubtedly has a deleterious effect on these women.

AGE OF PATIENTS

It may be of passing interest to speak of the ages of the patients studied in this series. As our youngest patient was 17 years old and our oldest 37, we divided them into two groups, each of ten years. There were twenty-nine women from 17 to 27 years of age. Ten, or 34.5 per cent., of these recovered, as compared to nineteen, or 65.5 per cent., who died. In the group whose ages ranged from 28 to 37, there were eighteen women, of whom ten, or 55.5 per cent., recovered, while eight, or 44.5 per cent., died.

The practical points to be gained from this study may best be outlined in a summary.

SUMMARY

1. The recent outbreak of epidemic influenza offered an opportunity for the study of numbers of pregnant women attacked by the disease.
2. Pneumonia and epidemic influenza complicating pregnancy have so many features in common that a study of the latter is of value, for its application not only to future epidemics, but also to the management of ordinary pneumonia as seen from time to time in pregnant women.
3. The mortality from epidemic influenza in pregnant women is much greater than in nonpregnant women.
4. Epidemic influenza caused abortion, miscarriage or premature labor in approximately 42 per cent. of the patients in this series.
5. The outcome of the case depends largely on the effect of the disease on the pregnancy, as evidenced by the fact that the mortality among pregnant women, high enough under the best possible circumstances (48.2 per cent. without interruption of the pregnancy), was markedly increased (80.9 per cent.) by the occurrence of abortion, miscarriage or premature labor.
6. The mechanism by which the disease disturbs the pregnancy seems to be a combination of factors such as deoxygenation of the blood, excessive accumulation of carbon dioxid in the blood, and a degree of toxemia sufficient to cause the death of the fetus. In the later months, the first two conditions may be sufficient to start labor, but in the earlier months it usually requires the additional condition of a dead fetus acting as a foreign body to initiate uterine contractions.
7. The ill effect of abortion or labor on the course of the disease may be explained on the following grounds: (*a*) muscular exertion increasing the already

excessive amount of carbon dioxid in the blood, and further straining the already weakened myocardium; (*b*) sudden release of intra-abdominal pressure by the extrusion of the fetus in an advanced pregnancy; (*c*) sudden reduction of blood pressure by hemorrhage incident to labor; (*d*) lessened resistance to the ordinary shock of labor and delivery.

8. The treatment should be primarily prophylactic, pregnant women being urged to avoid all possible exposure to cases of influenza or pneumonia or even common colds. In case of infection the patient should have absolute rest, fresh air (out of doors if possible), early stimulation, free elimination, avoidance of violent purging and quinin, sedatives as required, and in case labor or miscarriage comes on, early interference in order to relieve her as much as possible of the strain of the second stage. To this end forceps delivery is advised, as soon as the cervix is dilated, since the abdominal as well as the uterine muscles are in action in the second stage and the exertion, therefore, greater. Anesthesia is, of course, contraindicated and not required, because the patients are usually so toxic as to be indifferent to the pain whether the delivery be instrumental or spontaneous. Prompt measures against hemorrhage, such as uterine pack, should be instituted. Hypodermoclysis of physiologic sodium chlorid solution is frequently used and is probably preferable to intravenous injection, because the circulatory system must not only not be overloaded, but also not too suddenly strained.

ABDOMINAL PREGNANCY CONTINUING FOUR MONTHS AFTER UTERINE PERFORATION

OPERATION AND RECOVERY

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CHICAGO

The unusual course and findings of this case, and its extreme rarity, warrant the careful, detailed report.

REPORT OF CASE

History.—Mrs. L. S., aged 25, married five years, began menstruating at the age of 14. The first child, born in 1915, was a forceps case and died in one week from cerebral hemorrhage. The second child, born in 1916, is living and well. From the time this second child was 10 months old, the mother had menstruated regularly up to the early part of December, 1918. The latter part of December, two weeks following her menstrual period, her husband died of influenzal pneumonia, and when she failed to menstruate in January, she went to a midwife, who introduced a soft rubber catheter into the uterine cavity, where it remained for two days. One week later this was repeated and she then bled for three days. Two weeks after abortion she entered the Bellevue Hospital, New York, because of abdominal cramps and epigastric pressure, and remained there one week. She refused to have curettage performed and left the hospital. In March she came to Chicago and at the end of the month entered the Michael Reese Hospital, where she remained three days under observation. She left the hospital and went to work in a tailor shop. In both hospitals she denied any abortive measures had been attempted and gave misleading statements. During January, February and March, at her regular menstrual periods, she flowed for two or three days, but the flow was dark and foul smelling. The last period was March 18, 1919. April 14, while at work, she experienced a sharp pain in the region of the rectum, became dizzy, felt her heart pounding furiously and everything before her eyes turned black. She did not, however, lose consciousness. This was about 2:30 p. m. She was taken home and I saw her at 5 p. m. the same day.

Examination.—A young, well-nourished woman was lying in bed complaining of cramps and slight nausea. There was a slight pallor about the face. The temperature was 98.4; pulse 90 and of good quality. Because of the thickness of the abdominal wall and the extreme irritability of the patient, a satisfactory abdominal examination could not be made. However, there was no marked tenderness or rigidity. Vaginal examination disclosed a firm cervix with lateral lacerations. No tenderness or bulging in the vaginal fornices could be detected. The uterus could not be distinctly outlined. From the history obtained and the symptoms present, I advised her to enter the hospital, where an examination under ether could be made and the course to be taken decided on.

April 14, the patient entered the Wesley Memorial Hospital. April 15, the patient having been prepared for operation and anesthetized, bimanual examination showed the uterus slightly enlarged and freely movable. No masses were present at either side of the uterus. A uterine probe introduced into the uterine cavity encountered no resistance and slipped in up to the handle. A diagnosis of uterine perforation was made.

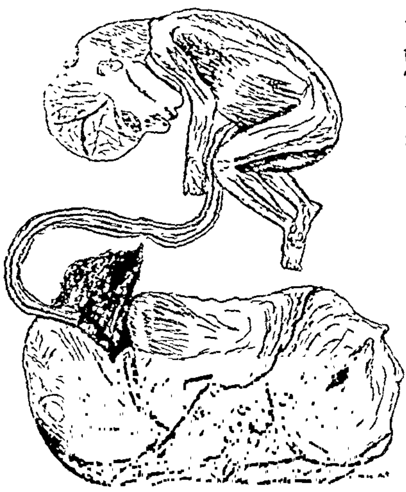
Operation.—A median incision was made from below the umbilicus to the symphysis, and on opening the peritoneal cavity, the entire area was filled with dark blood-clots. After removal of a large amount of clots and sponging out a quantity of dark fluid, the examining hand brought up a fetus from among the small bowels. From the development and size, the fetus was about five months old. The cord extended from the fetus to the uterus. The woman was placed in the Trendelenberg position and the uterus brought to view. A most interesting condition presented. The uterus was only slightly larger than the nonpregnant multiparous uterus, firm in consistency and at the fundus was attached a smooth, necrotic mass, the size of a small orange. There was a transverse tear at the junction of this mass with the fundus anteriorly. Protruding from this opening were tissues which were easily recognized as the placenta and its membranes, and into this opening extended the umbilical cord to its attachment.

Examination of the tubes and ovaries showed these structures normal. A supravaginal hysterectomy was decided on. The uterus was removed but the tubes and ovaries were left in situ. The cervical stump was covered with peritoneum and the two broad ligaments were sewed together, forming a broad firm support for the cervical stump and the vaginal vault. The abdomen was closed without drainage. On leaving the operating room the patient's pulse was 160. The foot of the bed was elevated and physiologic sodium chlorid solution was given per rectum, with the result that a few hours later the pulse was 100. By the fourth day the pulse returned to normal and remained so. There was an elevation of temperature for the first few days, the maximum reached being 101. The course from the fourth day on was uneventful and the woman left the hospital, April 28, thirteen days after the operation, feeling perfectly well.

Further examination of the specimen revealed a small perforation which connected the uterine cavity with the overlying necrotic mass. The perforation was a little to the right of the median line of the fundus. The mass over the fundus was friable and appeared to be organized fibrin and blood. This was completely filled with placental tissue. The placenta extended over the margin of the perforation and was attached for a short distance to the endometrium. Except for the point of perforation, there was a firm muscular wall between the uterine cavity and the placental mass on the fundus. The capacity of the uterine cavity was about two drams.

COMMENT

In view of the history obtained and the condition found at operation, what probably occurred was as follows: At about four weeks' pregnancy the catheters introduced either perforated the fundus or caused a local necrosis followed by perforation, with the expulsion of the products of conception into the peritoneal cavity. A portion of the placenta, sufficient to keep the fetus viable, retained its attachment to the endometrium. The rest protruded from the perforation and by partially filling up this opening no doubt controlled to some extent the hemorrhage which must have taken place, and so saved the woman from death from internal hemorrhage. However, there must have been a slow, continuous bleeding for the large amount of blood found in the peritoneal cavity and the absence of any severe shock would so indicate.



Uterus, placental mass and fetus.

The fetus and the greater part of the placenta lying extra-uterine became, in time, covered by a fibrinous deposit, which formed the false sac found at operation. The day preceding the operation this sac ruptured, giving rise to the symptoms then complained of and expelled the fetus into the peritoneal cavity. The size of the uterine cavity as compared with the size of the fetus definitely shows that for a period of about four months the fetus remained viable in the peritoneal cavity.

A careful search of the literature reveals only two cases of this type. Henrotin[1] reports a case in which perforation occurred at two months and in which operation was done a month and a half later. In this case the fetus contained in the sac was extra-uterine but the placenta was wholly within the uterine cavity. Leopold[2] reported a case from his clinic in which rupture of the uterus took place in the fourth month as result of a fall and pregnancy continued to term in the peritoneal cavity. Perforations in the course of a curettage or in attempted criminal abortions are not infrequent. No doubt some remain unrecognized.

Aside from the very unusual complication which I have reported, the literature abounds with reports of complications such as: prolapse of bowel through perforation, internal hemorrhage, peritonitis, sepsis, uterovesical and uterorectal fistula. Rupture of the uterus during labor is also encountered, especially through the scar of a previous cesarean operation.

In the vast majority of cases the symptoms are so prominent as to be recognized at once, and it has been estimated that in all cases, treated by operation and expectantly, there is a mortality of approximately 25 per cent.

30 North Michigan Boulevard.

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[1] Henrotin: Practice of Obstetrics of American Authors, 1899.
[2] Leopold: Arch. f. Gynäk., 1896.

AN EXTRACARDIAL MURMUR OF UNUSUAL ORIGIN

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Extracardial murmurs, in cases of chest injury, are sufficiently uncommon to warrant the report of the case of Private A. F., returned from overseas for discharge. A search in the literature has failed to reveal similar observations, although doubtless there may have been many, since Col. Warfield T. Longcope, in a personal communication, writes that he "heard of several while abroad."

Private A. F. suffered a shrapnel wound in the left chest posteriorly, Sept. 24, 1918, at Verdun. The piece of shrapnel entered the chest just below the angle of the left scapula. He was taken to a hospital, where bloody fluid was aspirated from the left chest, and on removal to a second hospital, Sept. 29, 1918, another aspiration was made; the patient was then evacuated to a third hospital, October 12, where the following note was recorded: "Left hemothorax filling almost entire cavity; heart markedly displaced to right; foreign body under left clavicle." October 21, "a portion of the sixth rib was resected in the axilla; the pleura was opened, bloody fluid drained out; adhesions were found all about the lung; a very heavy one above and behind. These were freed and the lung expanded well; the rib sutured in place; incision closed." A small piece of shrapnel was removed at this operation. October 31, the stitches were removed and the wound was found healed. It was noted that the lung expanded well and that there was still some fluid in the left chest. November 9, the left chest was aspirated and a few cubic centimeters of bloody fluid were removed. The lung expanded well; it was noted that a partial pneumothorax was present. November 16, the patient was classified "D" and then returned to the United States.

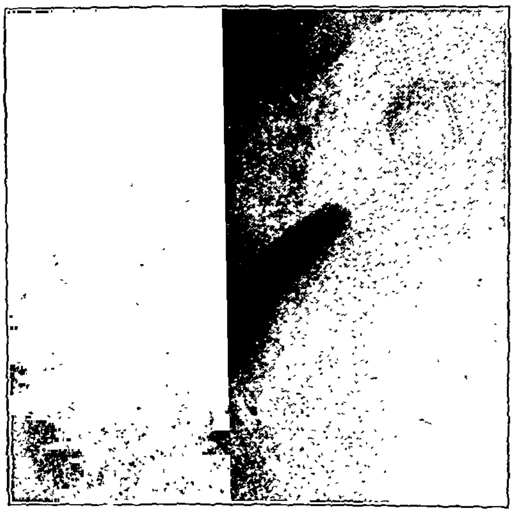

Fig. 1.—Anterior-posterior view of the chest: The foreign body can be seen just above the upper border of the third rib near the sternal line.

REPORT OF CASE

History.—The father, mother, two brothers, and one sister were living and well. No cancer or tuberculosis was present in the family. The patient had previously enjoyed good health. There had been no discomfort on exertion, and in the numerous physical examinations made before and during training, no cardiac abnormality had been noted. The patient walked into the hospital, apparently in normal health and without any complaint.

Physical Examination.—The patient was a well developed and well nourished man of 26, walking and exercising without fatigue or dyspnea. His pulse rate was 80 in the dorsal position—regular, rhythmic and equal. The left chest was somewhat less full, and the left costal border lagged. Three scars were visible—the first just below the angle of the left scapula, 2 cm. long; the second just above the outer third of the left clavicle, 1 cm. long, barely visible; the third, an operative scar, followed the left fifth rib from the midaxillary to the mammillary line. The fremitus over the left chest laterally and posteriorly was less than on the right side; the percussion note over the left chest in the axilla and below the scapula was impaired. The breath sounds were somewhat distant over the left back, but no evidences of moisture were found. The physical signs were believed to be those of a moderately thickened pleura.

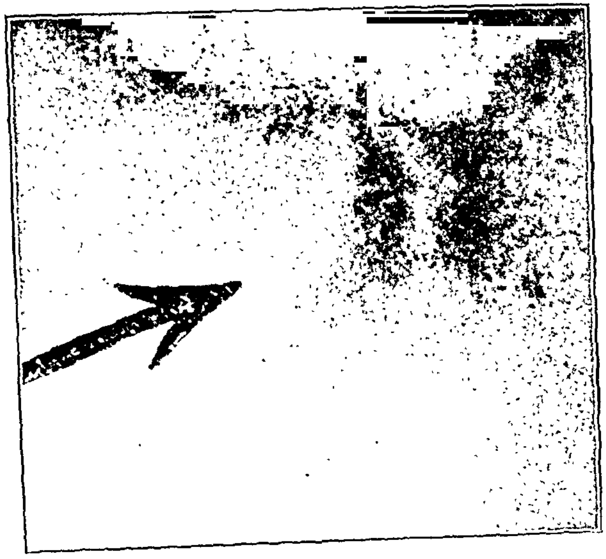

Fig. 2.—Lateral view of the chest: The fragment can be seen at the level of the fifth thoracic vertebra, just to the left of the body, near the pedicle.

Heart: The point of maximum impulse was in the fifth interspace, 8.5 cm. to the left of the midsternal line. The cardiac borders were as follows: The right cardiac border was 2.5 cm. from the midsternal line at the second, third, fourth and fifth costal interspaces; the left cardiac border was 2 cm. from the midsternal line at the second costal interspace, 6 cm. at the third, 8.5 cm. at the fourth and 8.5 cm. at the fifth interspace. The heart sounds were normal; a loud murmur, metallic in quality, was heard best over the third rib 6 cm. to the left of the midsternal line. This murmur, like the sound produced by the striking of cymbals, began in systole and faded away in diastole. It had one point of maximum intensity, although it could be heard over the entire left chest anteriorly and laterally. The murmur was heard faintly in the back, but was not transmitted to the vessels of the neck. It was equally intense in the various bodily positions, but when the arms were elevated vertically it faded out, and as gradually reappeared when the arms were lowered. This disappearance and the recurrence were noted on several examinations. Respiration did not change its character, but exercise intensified it. The reaction to exercise was within normal limits; the pulse rate dorsal was 80; standing, 80; after 100 hops, 100; two minutes later, 72.

Roentgenographic Report: "Metallic body about 2.5 cm. long and 0.5 cm. wide, apparently a shrapnel fragment, lodged in the chest at the level of the fifth thoracic vertebra, just to the left of the body near the origin of the pedicle." (R. Shoemaker 3d, First Lieut., M. C.)

COMMENT

An extracardiac murmur was evident in this case of chest injury caused by shrapnel. The murmur was dependent on cardiac systole and independent of respiration. It was distinctly separate from the cardiac sounds. It was not affected by change of bodily position except on elevating the arms, when the murmur faded out, to reappear on lowering them. The aorta rises to the level of the fourth thoracic vertebra, curving to the left of the fifth thoracic, so that the murmur may have been caused by the vibration of the scar tissue adjacent to the piece of shrapnel. Whether or not the murmur was due to the vibration of connective tissue with the foreign body acting as a sounding board could not be determined, but it may be definitely concluded that the murmur was a direct consequence of the chest injury, and that connective tissue played a distinct rôle in its causation. The act of raising the arms probably served to relax the strand of tissue, which was taut in other positions. Except for the unusual physical sign, the condition of Private A. F. was normal on discharge, and he has returned to civil life able to assume his prewar occupation.

THE ADVANTAGES OF THE VAGINAL ROUTE IN RESECTION OF THE RECTUM FOR CANCER

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No attempt will be made here to enter into a full discussion of cancer of the rectum. That subject is too large for the scope of this paper. It is a well known fact that sufferers from cancer of the rectum may live a long time, much longer than those who suffer from cancer in almost any other part of the body. Cancer of the rectum offers more prognostic hope than does cancer in other locations. This is largely due to two factors: The type of cancer is usually adenocarcinoma, which is slow growing; and the region about the rectum is very scant in lymphatic supply, and therefore metastastis is slow and does not occur until the growth has encroached on other surrounding structures.

It is remarkable that cancer of the rectum may exist for so long a time without being discovered, and when discovered is found not to have involved surrounding tissues. Indeed many cases go on to a condition in which the rectum is completely blocked, and obstruction of the bowel takes place, before they are found, the symptoms being attributed to hemorrhoids or some other condition largely because no careful examination has been undertaken by the attendant.

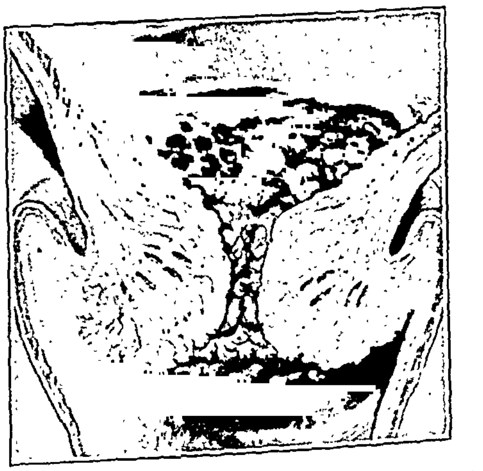

Fig. 1.—Rectum completely blocked by tumor.

Much has been written lately concerning the abdominal route, the sacral route and the combined abdominal route, inal and perineal routes. The old Kraske operation and others have been relegated to the junk heap, while the merits of the others and the question of a primary colostomy have been discussed at length; but I cannot find that much is said about the vaginal route in women, the simplest and easiest method of all.

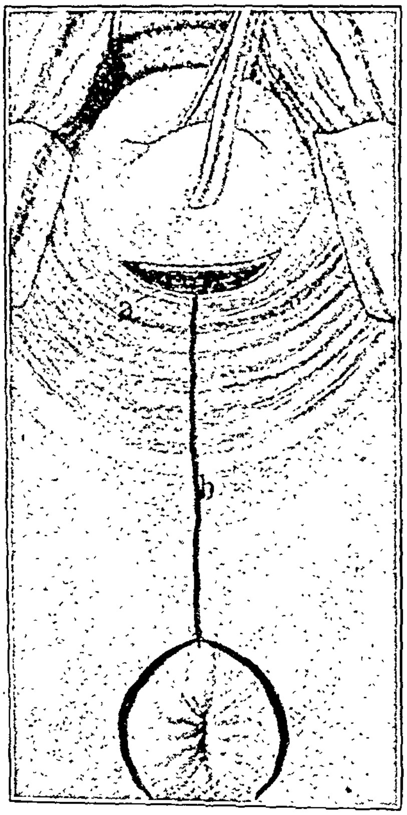

Fig. 2.—Long median incision from cervix to anus.

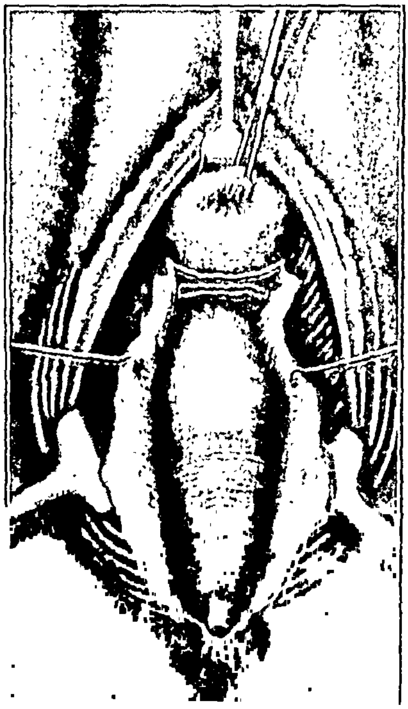

Fig. 3.—Vaginal flaps laid back exposing rectum (courtesy of Lea & Febiger).

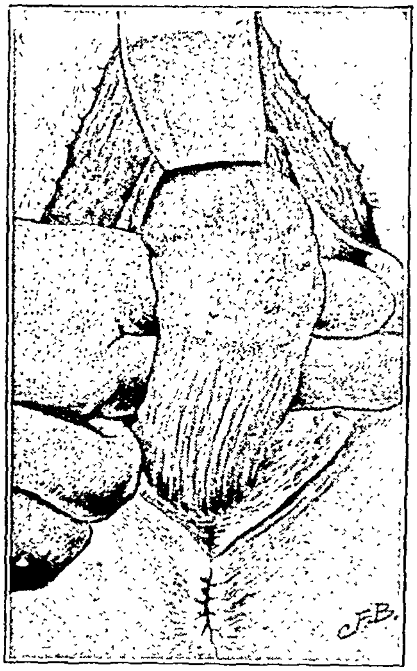

Fig. 4.—Rectum and growth lifted from its bed.

It is undoubtedly true that in the greater number of operations on the rectum for cancer the condition of the patient is much improved by a preliminary colostomy, just as happens in draining a bladder before doing a radical prostatectomy. Toxins are eliminated thereby, and opportunity is given for ulceration to be overcome. Inflammation is reduced, and an inoperable is often converted into an operable case. Intestinal obstruction is obviated if impending. The accompanying symptoms of pain, constant secretion and defecation are relieved, so that the patient may sleep and rest. Recuperation is thus insured, and the patient resumes her usual routine of life and is soon put into such a condition that she may successfully withstand the more radical major operation.

The technical advantages of the vaginal over the sacral route should be apparent to him who understands the anatomy of the pelvis. There are no important structures to be taken into account below the peritoneal fold except the two tubes which pass out through the levator ani muscle, namely, the vagina and the rectum. The operation consumes less time, there is less traumatism to the tissues, there is less hemorrhage and consequently less shock, which is an important factor in these weakened and toxic patients. There is no bone resection as in most perineal and sacral operations. I have always thought that the chiseling and sawing of bone in any operation must add materially to the shock of the operation. The dissection by the vaginal route is easy, the exposure is more perfect and one works in an open field rather than in the dark, thus being able completely to control hemorrhage.

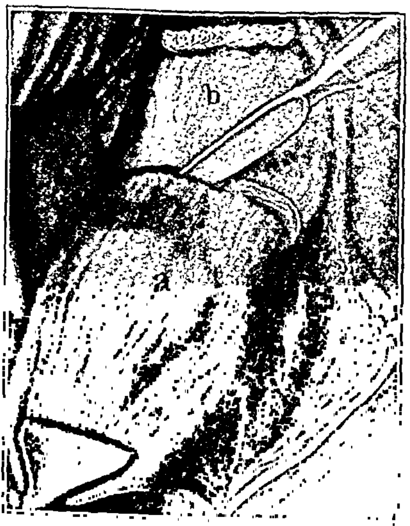

Fig. 5.—Resection of rectum (upper section should show clamp applied) (courtesy of W. B. Saunders Company).

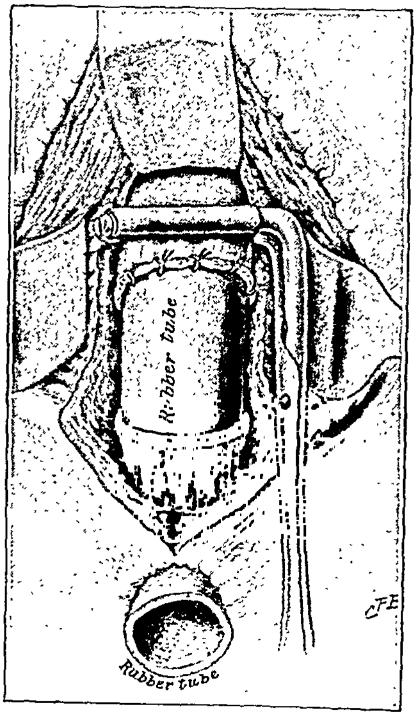

Fig. 6.—Tube sewed into upper segment emerging from anus.

Instead of being a *bête noir* of surgery, this operation for resection of the rectum for cancer resolves itself into little more than a complete dissection of the perineal structures for extensive vaginal repairs. The late John B. Murphy was an ardent advocate of this method of approach and did much to develop its technic. The operation is practicable only when the tumor is movable and is situated in the lower half of the rectum. If it is as high as the rectosigmoidal junction, then the combined abdominal and vaginal operation should be employed.

In beginning the operation, the sphincters should be thoroughly divulsed and the secretions of the rectum well washed away. A transverse incision is then made across the vagina at the junction of the mucous membrane of the posterior vaginal wall and the cervix. Perpendicular to this a median incision is carried down the whole length of the posterior vaginal wall over the perineum down to the anus. If the sphincters are to be retained, this incision should be deflected to each side at the anus. If not, it should continue completely around the margin of the anus. As the long median incision is deepened through the vagina and perineum down to the rectum, a large, thick flap of tissue is laid back on either side. This is made up of the muscular and ligamentous attachments of the vagina and rectum. When the rectum is reached, the fingers may be passed down along side of it and by blunt dissection the hand is passed, finally, completely behind it, lifting it out from its bed. It may then be easily pulled forward and it is remarkable how much of a loop of bowel may thus be pulled down. If it is rigid and there is difficulty in bringing it down, the simple expedient of nicking the posterior layer of the mesentery of the sigmoid at its lowest point just at the peritoneal fold will overcome the difficulty and allow it to come down freely.

The rectum is then clamped with a right angled, rubber tipped clamp about two inches above the margin of the growth and the rectum divided. If the sphincters are to be retained, the distal end of the rectum is similarly clamped and divided below the tumor. A 1 inch rubber tube is sewed into the upper end of the bowel and brought down and out through the anus, over which the anastomosis of the bowel is completed. After making the anastomosis it is well to draw the tubing down, slightly invaginating the upper into the lower bowel, and making a double row of sutures so as to assure perfect union and prevent leaks.

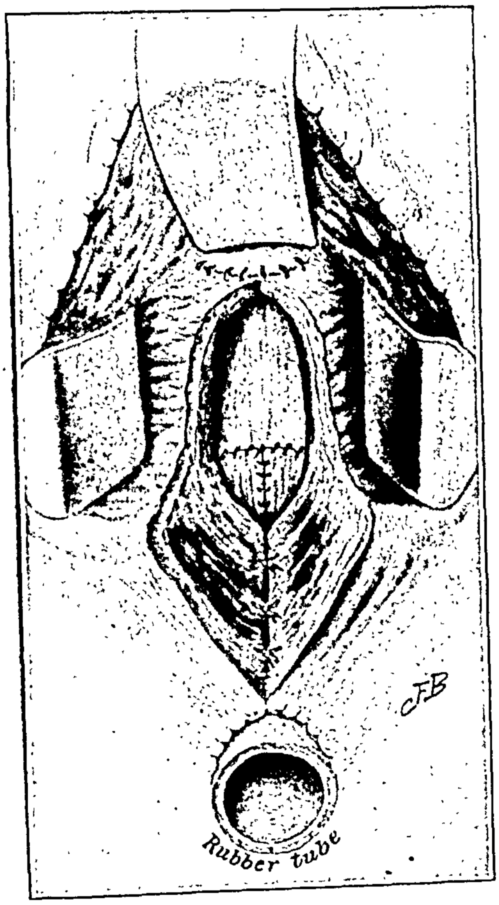

Fig. 7.—Anastomosis over tube completed.

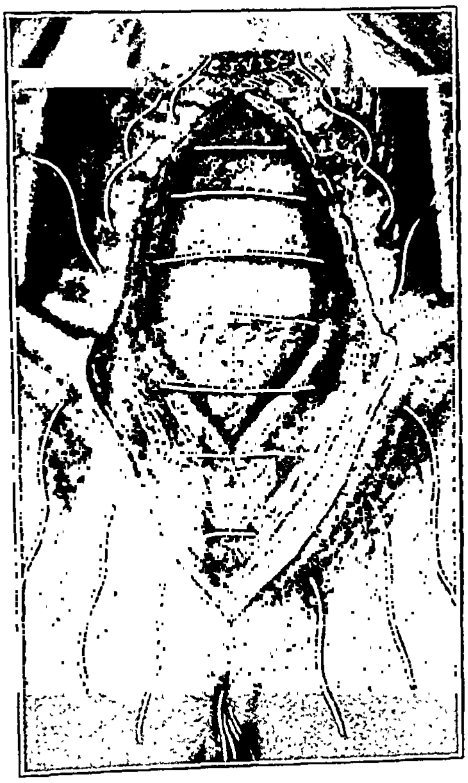

Fig. 8.—Sutures placed for vaginal and perineal repair (courtesy of W. B. Saunders Company).

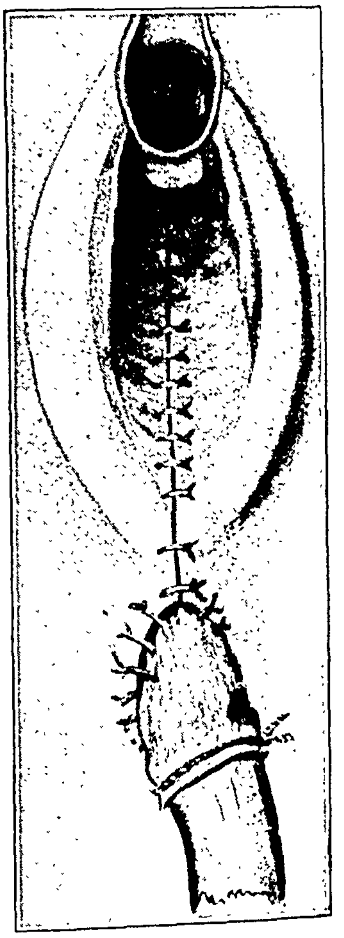

Fig. 9.—Vaginal excision of the rectum—the rectum sutured. A tube is tied into the divided end of the bowel.

In case the sphincters are removed with the rectum, the upper end of the bowel is brought out a full half inch or more beyond the anal skin and sewed fast to it. There is apt to be less stricture, perhaps, when the sphincters are removed than when they are not, but of course at the expense of fecal control. It is necessary to follow up the patient in these cases and keep the anus and bowel well dilated with rectal bougies as an after-treatment to prevent the formation of strictures.

After the rectal work has been completed, the muscles of the perineum are built up layer by layer, just as they would be in an extensive repair of the perineum, the lower lip of the cervix being sewed down to the transverse upper incision in the vagina.

Abdominal Symptoms Following Typhoid Inoculation.—Such symptoms were observed at Camp Custer in twenty-seven out of sixty-five admissions for typhoid reaction, and usually were not a cause of confusion in differential diagnosis from appendicitis. Typhoid inoculation did not appear to have played any demonstrable rôle as a cause of appendicitis or its recurrence. Typhoid inoculations have apparently resulted in recrudescence of old gallbladder disease; in a number of these there was a previous history of typhoid. In every case of abdominal pain, appendicitis should be considered, but attention to history and other symptoms and signs should usually result in avoidance of mistakes. A helpful thought in medicine is that reliance on any supposed pathognomonic sign, unsupported by other evidence, is dangerous.—*Review of War Surgery and Medicine* 2:28, 1919.

Clinical Notes, Suggestions, and New Instruments

ANEURYSM OF RIGHT VENTRICLE FOLLOWING TRAUMA: REPORT OF FATAL CASE

GEORGE H. CURFMAN, M.D., AND C. REX FULLER, M.D.,
SALIDA, COLO.

History.—N. H., aged 18, complained, July 19, 1917, of the effects of a kick in the epigastrium by a mule. Since the injury the patient had noticed difficulty in breathing, which had steadily increased in intensity. There was a persistent cough, accompanied by expectoration, the sputum consisting of frothy mucus, tinged with bright blood. The abdomen had become greatly enlarged during the previous month; likewise the ankles and legs. The personal and the family history were both negative.

Physical Examination.—The face was swollen, with marked puffiness under the eyes. The lips and the tongue were very cyanotic. The pulsation in the jugular veins was pronounced. On lying down the whole face became extremely cyanotic. The lungs were negative. The cardiac impulse was heaving in character and could be seen to extend from the seventh interspace about 1½ inches to the left of the nipple line over the entire cardiac area. The area of cardiac dulness was greatly increased both to the right of the sternum and to the left of the midclavicular line. Auscultation elicited a loud systolic murmur, which was most audible at the apex, and was transmitted over the entire cardiac area. At the end of systole this murmur became whistling in character, later fading into a faint blowing murmur. The second pulmonic sound was accentuated. The abdomen was distended with fluid and there was marked tenderness to pressure, most noticeable in the epigastrium. The liver extended about three finger breadths below the left costal margin and was tender to pressure. The lower extremities from the ankles to above the knees were swollen and edematous.

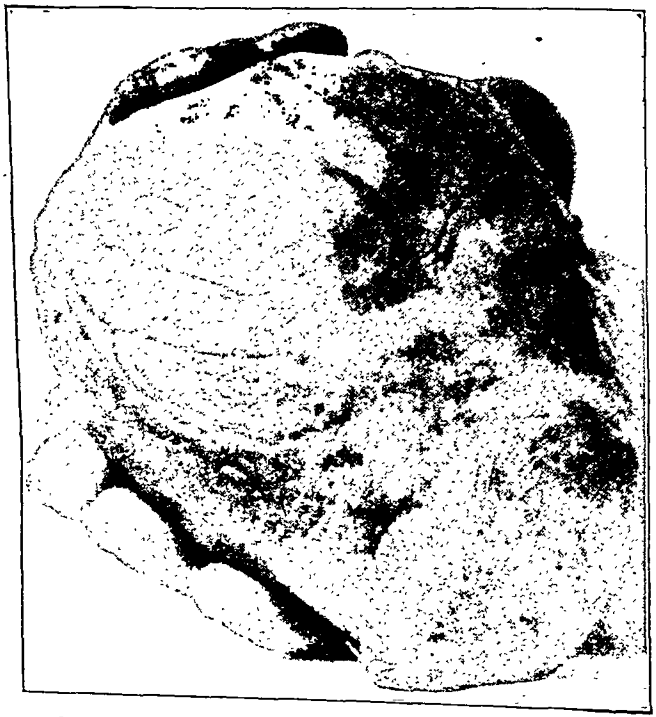

Fig. 1.—Anterior view of right ventricle showing aneurysm.

Clinical Course.—The patient gradually became worse; the cyanosis deepened, and the abdomen became steadily more distended with fluid. The pulse became irregular and weak, and, Feb. 27, 1918, the patient dropped into a mumbling delirium and died at 5:20 a. m., Feb. 28, 1918.

Necropsy.—On opening the chest wall the pericardial sac was found to be filled with about 1 liter of light, amber-colored fluid. The pericardium was greatly thickened. The lungs were normal. The heart was enlarged and weighed 723 gm. The circumference at the base of the ventricles was 13½ inches. The length of the right ventricle was 7 inches and of the left ventricle 5 inches. At the apex of the right ventricle was found an irregular tumor about the size of a half lemon, which proved to be a sacculated aneurysm of the right ventricle, connected with the right ventricle by an opening large enough to admit the index finger. The right ventricle was greatly hypertrophied with a relative insufficiency of the tricuspid valve. The abdomen was normal except for a large amount of ascitic fluid.

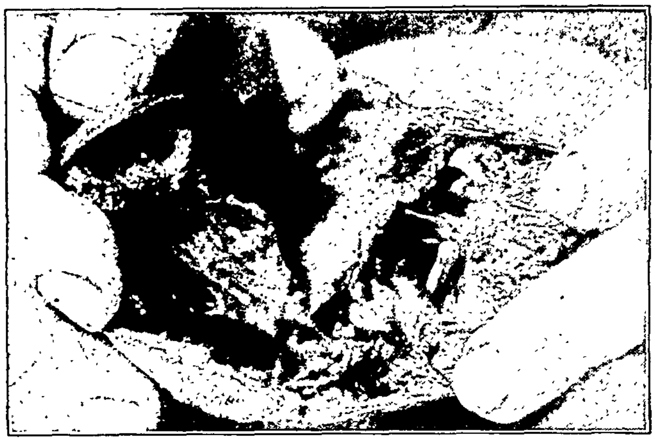

Fig. 2.—Aneurysm opened, the match showing opening into the right ventricle.

A CASE OF PROBABLE PATENT DUCTUS ARTERIOSUS IN AN ADULT *

CLEMENT H. ARNOLD, M.D., SAN FRANCISCO

The patient presented herself to me in February, 1919, with the complaint of dyspnea, always more or less marked, but latterly very severe on exertion; vertigo; loss of 20 pounds in three months; moderate loss of appetite, some slight gastric indisposition and palpitation.

HISTORY OF CASE

She stated that she was the wife of a retired military officer, whom she had accompanied on all of his official duties, having cooperated energetically in his affairs and social activities. She has been moderately athletic, has had a few minor attacks of rheumatism, but recently rather severe, precordial pains radiating high into the axilla, down the left arm and into the epigastrium. All her symptoms are negative in the anamnesis. There is one child living and well at 42; no subsequent pregnancies; catamenia at 50 with no disagreeable symptoms.

PHYSICAL EXAMINATION

The status praesens was that of a well preserved, slender woman of about 63, with dark vermilion lips, bluish mucosae, purplish red spots on the cheeks, slight bilateral epiphoria, red ears and markedly pulsating cervical vessels. The general appearance reminded one strikingly of chronic emphysema, coal-tar poisoning, advanced mitral stenosis, polycythemia and congenital heart lesions.

The eyes, ears, nose, mouth, teeth, throat and thyroid gland were normal. The thorax was slender, with a slight right scoliosis involving the upper thoracic vertebrae. There was a decided prominence over the upper precordium, implicating principally the first, second and third chondrosternal junctures. There was a rather more palpable than visible pulsation in the second left interspace one finger's breath from the left sternal line and there was a thrill practically coincident with systole in that area.

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* Presented before the San Francisco County Medical Society, April 1, 1919.

Percussion of the chest, excepting the heart, showed no gross abnormalities, though there was some dulness at both bases with a few consonating râles that disappeared after cough; probably secondary to the cardiac condition.

Heart.—Palpation showed a forcible heave over the lower precordium of the choc en dôme type, with a thrill as noted above. Percussion revealed the following: The point of maximum intensity was at the fifth interspace, 9 cm from the midsternal line; retromanubrial dulness 3 cm. to the right and 7.5 cm. to the left; relative cardiac dulness 5.5 cm. to the right and 11.5 cm. to the left. Auscultation revealed a very irregular heart with what appeared to be interpolated ectopic beats. The first sound was loud and clear. At the apex the second sound was loud and metallic in character; there were no murmurs at the apex. The pulmonic second was very much louder than the aortic, having a note like the aortic bruit de tabourka found in hypertension. There were no murmurs except at the pulmonic area, where there was a moderately harsh "roaring" or "rumbling" murmur, which was accentuated at each systole. It was propagated out along the under side of the clavicle and lost at the deltoid sulcus.

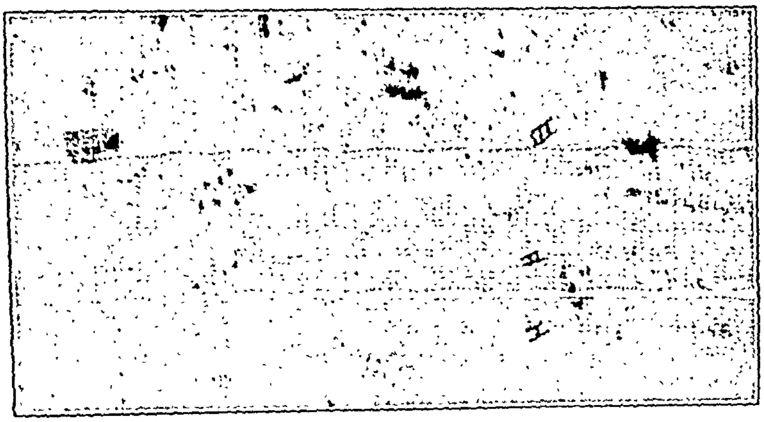

Fig. 1.—Electrocardiogram: Moderate irregularity of ventricles with no definite P waves. S is very marked in Lead 1, ventricular complex small in Lead 2, R highest in Lead 3. The conclusion was that there was hypertrophy of the right ventricle relative to the left, and that there was possible fibrillation.

The area of dulness indicated by the left lateral extension of the retromanubrial dulness joined the upper convexity of the relative cardiac dulness very steeply, demonstrating the so-called Gerhardt's area.

The reflexes were normal; the genitalia negative. There were no general glandular enlargements. The abdomen showed a moderate first degree of visceroptosis, with a right oblique inguinal hernia presenting through a wide-open ring with soft edges.

The pulse was normal in tone, very irregular and with a rate of 110; the vessels were not noticeably sclerosed. The blood pressure was 142 systolic and 80 diastolic. The patient weighed 115 pounds.

LABORATORY TESTS

The Wassermann was negative. The urine showed a slight trace of albumin. The phenolsulphonephthalein test resulted in an excretion of 32.5 per cent. in two hours. The stomach test meal showed 15 per cent. free acid, and 25 per cent. total acidity. Blood examination revealed red blood cells, 5,500,000; white blood cells, 8,700; hemoglobin, 95 per cent. The differential blood count revealed: polymorphonuclears, 49 per cent.; lymphocytes, 47 per cent., and transitionals, 4 per cent.

The electrocardiogram shows that the right ventricle as compared to the left is hypertrophied, and that fibrillation is probably present. Therefore it is evident ectopic beats may not be recognized when fibrillation is present; and if this is the case the statement made above is invalidated (Fig. 1).

The roentgenogram (Fig. 2) gives a most interesting picture. There is an increase in the transverse diameter of the heart shadow to right as well as left; probable dilated internal mammary artery (Fig. 2, 1), indicating increased collateral circulation; evidence of sclerosis, as there is (Fig. 2, 2) a definite crescentic plaque in the knob of the aorta. There is an increase in the transverse diameter of the mediastinal shadow, with marked prominence in the region of the pulmonary artery (Fig. 2, 3); there is a definite expansile pulsation of this prominence.

TREATMENT

It was observed that the initial bluish color of the mucosae and lips was greatly mitigated by rest, changing to a reddish pink. On the exhibition of digitalis the murmur at the pulmonic area became modified, growing louder and more continuous, and prolonged somewhat into the diastolic phase. As far as the heart is concerned the evidence caused the diagnosis of a probably patent ductus arteriosus, with a more or less surely accompanying patent foramen ovale.

COMMENT

The ductus arteriosus is the vessel which in fetal life connects the pulmonary artery with the aorta. It is usually about 10 to 15 mm. in length, and arises from the left branch of the pulmonary artery, joining the under side of the aortic arch just distal to the origin of the left subclavian artery, and represents the lateral vessel of the left sixth branchial arch. Its lumen usually becomes occluded a few months after birth.

One of the misconceptions that has prevailed is that the ductus in all adults is of insignificant size, but there are many cases in which, though it is by no means patent, examination reveals that it may be dilated to the size of a small lead pencil, and in the new-born may equal the main pulmonary trunk in circumference. Its existence with some of the attendant anomalies were known to Galen and Harvey, and since then many observations have been made as to its existence and persistence.

After the infant is born there very soon occur modifications of action and function in many parts of the body, the most extensive and spectacular being those of the circulation. It is, of course, well known that the ductus arteriosus serves to return from the right heart the unaerated blood from the head and upper extremities to the aorta and thence to the placenta. Since there is very little intrinsic circulatory activity in the pulmonary artery, owing to inactivity of the lungs, the pressure therein is relatively low.

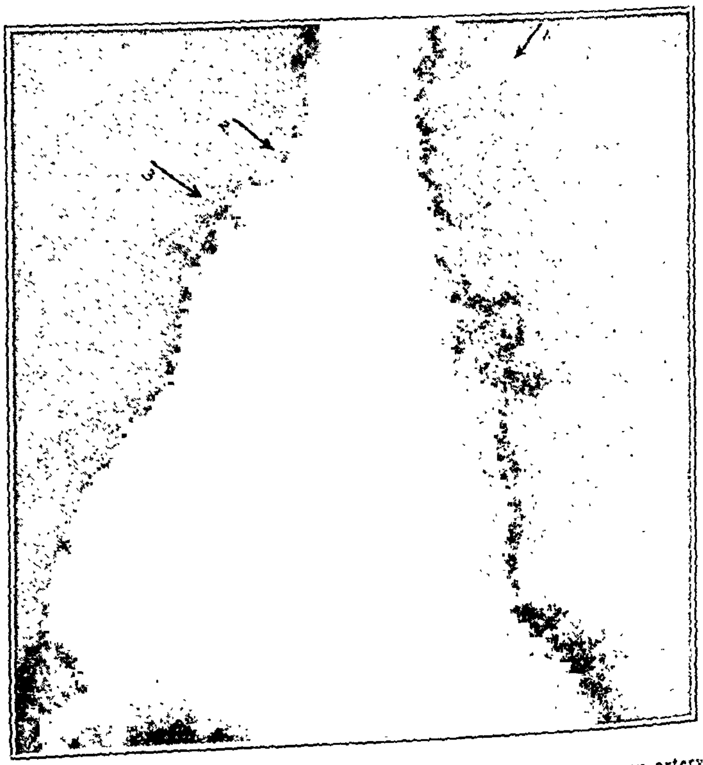

Fig. 2.—Roentgenogram of heart: *1*, dilated internal mammary artery evidence of sclerosis; *2*, crescentic plaque in the knob of the artery; *3*, prominence in region of pulmonary artery.

The opening of the ductus into the aorta is by means of a flap-valve-like arrangement, similar to that of the ureters into the bladder. As soon as the lungs begin to functionate and require a greater supply of blood with freer flow, the pressure falls, while that in the aorta becomes relatively higher. No blood, or very little blood, flows through the ductus and the flap of the valve is pressed down against the opposite wall of the ductus and occlusion is gradually effected; the lack of blood in the ductus depletes its vasa vasorum, fibrotic degeneration sets in and there is a pari passu contraction of the muscle tissue contained in its wall (Abbott).

When the ductus remains patent it is often associated with other defects in the structure of the heart, such as patent foramen ovale and interventricular septum.

Its exact pathogenesis under such a condition is, at best, obscure. Abbott says: "The causes of patency of the duct are to be sought in the conditions of its normal closure, and this must depend on the influences, mechanical or otherwise, of the changes in the circulation at birth, and on the action of the vessel wall, itself a fetal structure destined to involution."

It is probable, however, that "anything which causes obstruction to the flow of blood through the arch of the aorta in fetal life (aortic stenosis or atresia, congenital mitral stenosis, coarctation of the arch of the aorta, etc.) will cause the right ventricle to carry on the greater part of the circulation and force more blood through the ductus arteriosus. This condition, of course, persists at birth; the ductus, which now represents a main blood channel, remains open. The flow continues in the usual direction backward from the pulmonary artery into the aorta" (Hirschfelder). A narrowing of the pulmonary artery will reverse the flow.

As a primary and uncomplicated occurrence it is one of the rarest of cardiac anomalies, and the literature on the subject is correspondingly scanty.

The ductus may remain patent in a variety of forms which it is not necessary to enumerate here, by all odds the most interesting and the one giving the most signs and symptoms is that in which there succeeds an aneurysmal dilatation, with more or less involvement of the same nature in the pulmonary artery.

Most of these patients do not attain to adult life, though the condition is congruent with normal development during a long and useful career.

The most likely other forms of cardiac defect which it was deemed necessary to consider were patent foramen ovale, aneurysm of the sinuses of Valsalva, and pulmonary aneurysm. The first may certainly in this case be present, considering the frequency with which it accompanies a patent ductus; the second is not likely, as the signs are not present and there is nothing in the plate to indicate it; the last condition, if it does exist, is only a part of the whole, since its characteristic signs are not present, the dilatation is rather too high and too far laterally, and there is no evidence of pressure on the lungs within the mediastinum.

CONCLUSIONS

In conclusion, it will be interesting to compare the classical signs and symptoms given by the authorities on this subject (Osler, Abbott, Barker, Hirschfelder and Mackenzie), with those found in this case:

A proved case revealed the following conditions: (1) Gerhardt's area of dulness; (2) pulsating pulmonary artery; (3) dilated and hypertrophied right ventricle due to regurgitation into the pulmonary artery through the ductus; (4) dyspnea on exertion; (5) more or less cyanosis; (6) polycythemia may be present; (7) precordial bulging; (8) greatly accentuated pulmonic sound; (9) characteristic rough murmur with propagation out along clavicle; (10) Abbott says also that "arteriosclerotic patches are not uncommon in the neighborhood of the duct in the aorta . . . ."

By comparing this with what has been said about this case, it will be seen that all of the enumerated criteria were found. Besides, one may see that the arteriosclerotic patch mentioned in the tenth item is present in this patient (Fig. 2), and is remarkable as occurring in a woman with no other demonstrated sclerosis and a normal blood pressure for her age. For comparison, I should like to refer the reader to the plate shown by Hirschfelder,[1] illustrating a known case which is practically a duplicate of the one presented herein.

I am perfectly well aware that in such cases the only obiter dictum is necropsy, which can not be performed and which I hope will not for many years. But the findings were so clean-cut in this case and tallied so well with what is believed to indicate such a condition intra vitam, that I have deemed it worthy of record.

Under tincture of digitalis, 10 minims three times a day after meals, a general tonic and some light exercises serving to promote and maintain better respiration, the patient's heart has become more regular, the dyspnea on exertion has practically disappeared and she has gained 7 pounds in four weeks, while her general mental attitude is much more wholesome.

405 Medical Building, Bush and Hyde Streets.

INSTRUMENT FOR HOLDING PERIPHERAL NERVES DURING SUTURE

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Lieut.-Col. M. C., U. S. Army

The instrument for holding peripheral nerves during suture which is here described and illustrated has greatly facilitated the suture of divided nerves and has reduced, in some cases, the actual time of suture by one half.

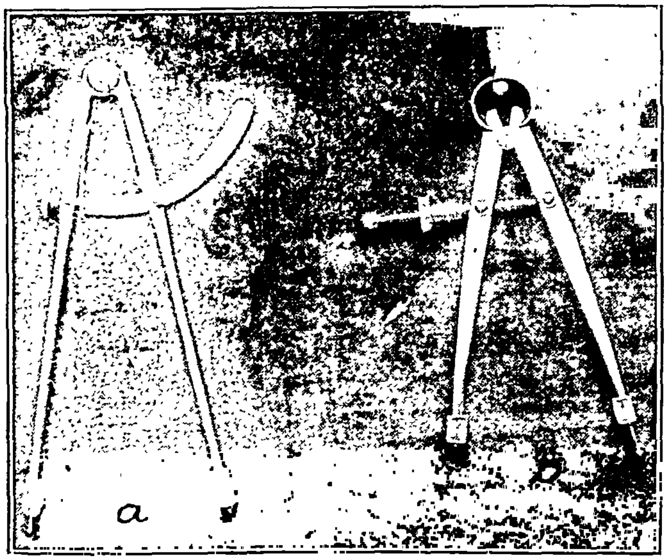

Fig. 1.—A, nerve clamp, showing glass headed pins used to fasten the nerve to the instrument. The milled screw to the left is a fine adjustment; B, insrument made from a pair of Starrett calipers, by brazing perforated curved ends and short pieces of small German-silver tubing (to receive the pins) to the arms of the instrument.

The halves of the instrument are applied and pinned to the nerve trunk 2 or 3 cm. distal to the proposed point of nerve resection. The nerve ends are then freed and sliced back by a razor blade until the section shows the desired fasciculi. By closing the arms of the instrument the nerve ends are apposed. After suturing the accessible edges of the nerve sheath, the instrument is turned over and the rest of the circumference of the sheath is sutured. The pins are now gently withdrawn and the instrument is removed. By applying the instrument before completely freeing and dividing the nerve, rotation and retraction of the nerve ends are prevented. After the instrument is applied, it should at once be tightened sufficiently to produce moderate traction. If there is a wide separation between the nerve ends, the continued tension will cause the nerve to stretch. The instrument may then be gently retightened from time to time as the operation proceeds, thus reducing the gap. The instrument should be made in at least two sizes. The grooves of the large instrument should be about 12 mm. and of the small instrument about 6 mm. in diameter. It may readily be made from a pair of Starrett calipers by brazing appropriate ends (Fig. 1 b). For the larger nerve trunk the small, glass-headed, steel pins of daily use serve very well. For very small nerves very fine needles to which metal or glass heads have been fused may be used. It is somewhat more convenient to introduce the needles from the shaft side of the instrument. We have had the instrument made also in the form of delicate hemostatic forceps with a long rachet adjustment. The instrument as illustrated in Figure 1 a has a thumb screw at the left which provides a fine adjustment.

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[1] Hirschfelder: Diseases of the Heart and Aorta, J. B. Lippincott Company, Ed. 2, p. 543.

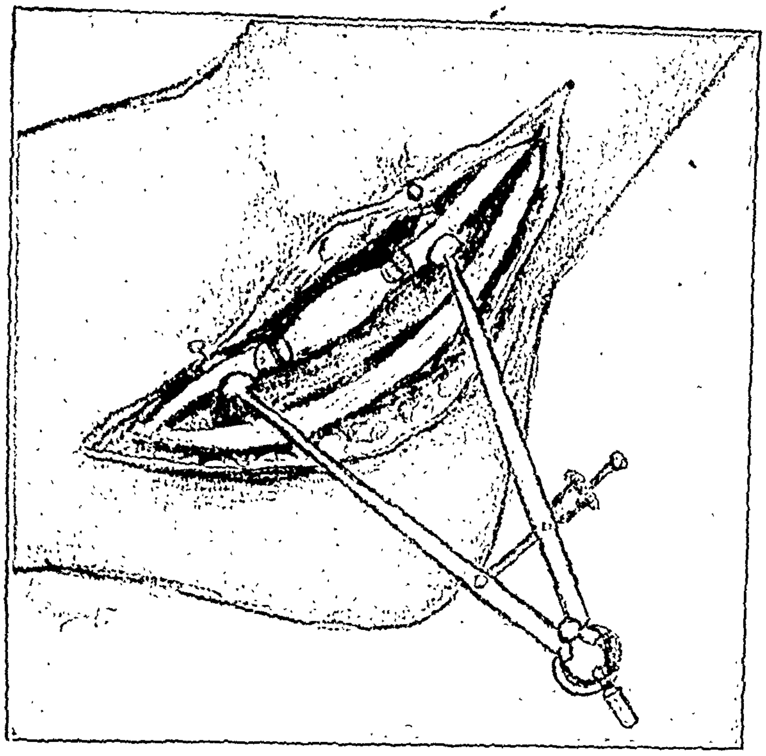

Fig. 2.—Nerve clamp pinned to posterior tibial nerve at the ankle, preparatory to resection of a neuroma in continuity. Repeated incisions are made into the neuroma until sufficiently normal sections of nerve trunk are found for end to end suture.

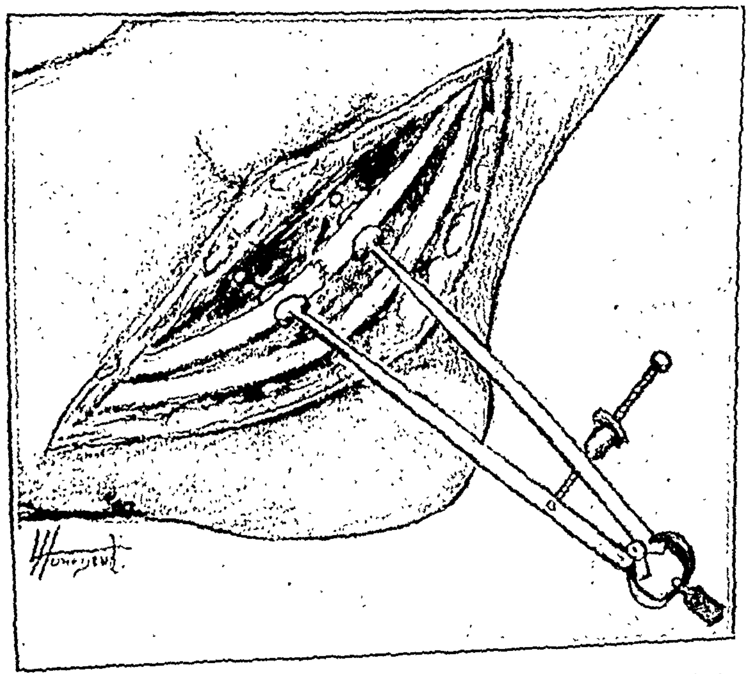

Fig. 3.—The neuroma has been freed and excised, the arms of the instrument brought together, permitting the nerve ends to be accurately united without tension by very fine black silk sutures which enter only the sheath of the nerve. The instrument obviates the need of the harmful transfixion or relaxating sutures through the nerve trunk.

If properly used the instrument should rarely tear out. It is believed that the reduction in the handling of the nerve outweighs the slight damage produced by small needle punctures. In over 100 cases of division of peripheral nerves from gunshot injury, we have found none in which an end to end suture could not be performed. For the larger nerve gaps, it is of course necessary to flex or extend the adjacent joints and perhaps also to dislocate the nerve to a new location. A number of gaps of 12 cm., of median, ulnar and sciatic nerves, have thus been overcome.

We are indebted to Major William G. Crumley, M. C., and to the Orthopedic Shop of this hospital for the preparation of working models.

Therapeutics

SUGAR IN THE URINE

The presence of sugar in the urine is a condition calling for investigation. While the occurrence may be accidental, or incidental to some indiscretion in diet, a decision must be made as to its cause. In many well persons sugar will readily appear in the urine if the normal starch and sugar ingestion is overstepped. These patients should be warned of their tolerance deficiency, and told that such intolerance may increase if they eat according to their desires. This narrow limit of tolerance may be inherited, or it may be caused by some glandular disturbance, or by previous disease that has left its mark on some organ concerned in sugar metabolism.

Excessive nervous or mental tire may be the cause of the sugar metabolic instability, or overmuscular activity, combined with some glycogen metabolism mistake, may cause sugar to appear in the urine. In other words, a patient found at times to have sugar in his urine should be studied, and then warned of the probable cause. A suitable, carefully modified diet should be arranged for him. His urine should be retested every few months.

GLYCOSURIA

The term "glycosuria" should not be used to cover up the possibility that more or less persistent excretion of sugar in the urine, even if readily prevented, is probably a mild diabetes or may be the forerunner of a severe diabetes. However, many patients with glycosuria have no other symptoms of diabetes, such as thirst, polyuria, dry skin, itching, loss of weight, and tendency to hyperacidity or to acidosis and its symptoms. In these cases, the pathologic condition is generally due to infection somewhere, or to glandular disturbance, also often caused by infection. Although in real diabetes boils readily occur from outside irritation and outside germs of infection, many boils and eruptions in both mild and severe diabetes are doubtless due to focal infection. Glycosuria may be caused by pyorrhea alveolaris, whether by such infection acting on the thyroid, the suprarenals, or the pancreas, cannot be determined; but many times glycosuria will disappear when the pyorrhea is eradicated, and these patients can again eat ordinary amounts of carbohydrates. It has long been recognized that thyroid and pituitary disturbances directly or indirectly may cause sugar to appear in the urine. Suprarenal disturbance may produce a glycosuria. Doubtless other focal infections, notably, perhaps, infection of the gallbladder, may cause glycosuria, or be the cause of real diabetes.

Some of these infection cases may be the ones that have shown improvement under ipecac (emetin) or under yeast treatment, while such treatment utterly fails in diabetes caused by other conditions. Even in these cases of mild diabetes, the blood pressure is generally very low, either from some insufficiency of the suprarenals or because the infection has also weakened the heart muscle.

The point it is desired to make in these cases is that every cause for the glycosuria should be sought. It is not sufficient to be satisfied with a regulation of the diet, even if such modification renders the urine sugar free.

DIABETES MELLITUS

1. As has been suggested, every possible cause should be sought and all side irritations and infections (if present) should be removed.

2. Inherited tendencies should be ascertained, both as to diabetes and to obesity.

3. The prognosis, even in childhood, is much better than it was before Allen clarified the diet treatment.

4. Loss of weight, even in the thin, need not be a matter for worry.

5. The amount of sugar lost per day on an ordinary diet and on ordinary exercise should be ascertained.

6. The presence or absence of diacetic acid and acetone bodies should be noted.

7. If the case seems a mild one, the starvation period may be taken with the patient up, but at home. If the case is severe, especially if there are signs of increased acidity, he must be in bed, as any muscular exercise adds to that acidity.

8. All fats should be excluded from the diet for several days before the starvation period is begun.

9. During the starvation period, the patient should receive plenty of water, with perhaps some clear tea or coffee. Mineral waters are of advantage.

10. Ordinarily the patient should be sugar free in forty-eight hours. If he is not, the starvation period may be prolonged another day or two.

11. If the heart is weak and coffee does not help it, strychnin, in doses of $^1/_{60}$ grain once in four hours, may be given, or digitalis may be given.

12. If diacetic acid, betaoxybutyric acid and acetone are dangerously increased in amount, whisky may be given, about one-half an ounce every three hours. Sodium bicarbonate is the most used treatment for this condition, and the dose must be large by the mouth; by the rectum in 10 per cent. solutions (perhaps by the Murphy drip method); and from 2 to 4 per cent. may be given, slowly, intravenously in physiologic sodium chlorid solution. If there is edema, which is a bad symptom, the alkali either should not be given, or given in small doses only. It has been suggested that perhaps it may be better not to give an alkali which may protect the dangerous ammonia from being used to neutralize the extra acid.

13. When the urine is sugar free, the use of foods containing a little starch should be begun to find the limit of tolerance; then small amounts of protein should be added, and later very small amounts of fat.

14. Diet tables for a gradual increase, especially of starch contained in vegetables, need not be given here, as they may be readily consulted elsewhere. Suffice it to say that the danger in a diabetic diet is the withdrawal of carbohydrates and the coincident allowance of too much fat. Sodium bicarbonate seems to help a diabetic properly to metabolize starch.

15. Constipation should be prevented.

16. There should be a fast day once a week. If the case is a mild one, this may be a green vegetable day, or an oatmeal day.

17. If these patients cannot take, or are not allowed to take, milk, some extra calcium should be given, perhaps as lime water.

18. Mild exercise is of advantage in diabetes; hard exercise is bad in severe diabetes, as it tends to precipitate an acidemia.

19. Even if the urine is sugar free, there may be a hyperglycemia. Also, acidosis may occur without diacetic acid in the urine. Hence the patient should be carefully studied, even with normal urine.

20. If a diabetic is to undergo an operation, fats should be excluded from the diet and starches should be reduced, but not absolutely removed; alkalis should be increased before the operation.

21. A diabetic woman becomes more acid during menstruation.

22. A diabetic should always dress warmly, and, if possible, he should go to a warm climate.

23. If a pregnant woman has a large amount of sugar in the urine which is not readily prevented by diet, consultation should be had as to the advisability of causing abortion or promoting premature labor.

Mental Defect in a Rural County.—That society pays a heavy penalty for the neglect of its children is emphasized by the results of a study made in an Eastern state by the Children's Bureau of the U. S. Department of Labor in collaboration with the U. S. Public Health Service. The conditions surrounding the 192 feebleminded children included in the study revealed the coincidence of poverty, drunkenness and delinquency with feeblemindedness. The county studied is a backward rural county, such as may be found in many sections of the United States. It boasts no town of more than 2,500 inhabitants. Bad roads and inadequate railroad facilities keep living conditions primitive. In a few homes spinning and weaving is still done on old-fashioned wheels and looms handed down from Revolutionary times. Whipping remains a punishment for larceny. School and church "socials" and yearly camp meetings are about the only recreational activities in the remoter districts. The 192 feebleminded children studied were between the ages of 6 and 20. Twenty-seven of them were so defective that they could not attend to their personal needs; sixty-five had serious physical handicaps; eighty-six were not receiving the care they should have. Only four children had been placed in an institution, unfortunately the county almshouse, which was not adapted to the care of such cases and had not the legal control necessary to insure proper protection. The parents of 54 per cent. of the white children and 71 per cent. of the colored children who were living in their own homes, were without the means to provide properly for their families. Although more than two fifths of the children from 12 to 20 years of age were capable of doing work under supervision and might have been helped by industrial training to perform higher grades of work, the county afforded them no opportunity for special training. The schools were inadequate for the needs of normal children. Most of them were of the one-room, one-teacher type, and many of them were so situated that numbers of children could claim exemption from attendance because of the distance to be traversed. The report suggests the possibility of providing training and supervision whereby certain types of mental defectives may safely remain in the community. The urgent need for institutional provision for those who cannot be given proper care in their own homes is emphasized.

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SATURDAY, JUNE 7, 1919

NAUSEA AND VOMITING OF PREGNANCY

A group of symptoms affecting the pregnant woman and varying in severity from mild "morning sickness," through a range of more intense nausea, to the extreme of "pernicious vomiting" presents difficulties that are not always easy to combat. The theories advanced in explanation of the origin of these phenomena are unsatisfactory because most of these theories bear on symptoms that are at best only part of the possibilities presented by this particular type of nausea and vomiting. Acidosis, for example, which has been one of the explanations offered in the past, fails to account for the features observed in many instances. The hypothesis of "suboxidation" has not justified itself in attempting to explain these, as well as various other, pathologic disturbances. The hypothetic poison has not been discovered. The alleged accumulation in the blood of nonmetabolized nitrogenous compounds, such as amino-acids, has not been substantiated. As recent writers have summarized the situation: "Neither from the point of view of cause or cure has any satisfactory solution of the problem of nausea and vomiting or pernicious vomiting been arrived at. Rest in bed, forced fluids, attention to excreta, diet, and control of the nervous system by the use of mild and strong sedatives, appears to be the most commonly adopted procedure for this condition."[1]

There are various indications that point to the dominance of some metabolic factor in the origin of both the mild and the severer types of the nausea and vomiting of pregnancy. The symptoms appear most frequently in the morning after refraining from food for some time. Moreover, the common simultaneous occurrence of a ketonuria is an added indication of a metabolic upset. This symptom is usually observed when the supply of actually utilized carbohydrates is low, for example, when sugars fail to be oxidized, as in diabetes. Shortage of physiologically available carbohydrate, usually expressed in the glycogen supply of the tissues, frequently leads to infiltration of the liver with fats. Present-day physiologic evidence points to this phenomenon as an indication of carbohydrate starvation in the body. Fat is not deposited in the liver while carbohydrates are still available. In the liver, says Lusk, there is an antagonism between glycogen deposit following carbohydrate ingestion and fat deposition.

Mottram[2] has observed that in the pregnancy of ill-nourished animals, the liver may become overloaded with fat, just as is true in certain stages of inanition. In view of all these symptomatic similarities Duncan and Harding[1] of McGill University Faculty of Medicine, Montreal, have argued that these two factors, pregnancy and a short period of hunger, might account for the periodicity of morning sickness, and that the metabolic factor here concerned is a temporary relative lack of glycogen in the liver. Such a condition, they add, leads to a fatty infiltration of that organ.

The obvious practical conclusion that follows from this hypothesis is to preserve or enrich the supply of available carbohydrate for the patient. This is by no means a new procedure. Despite the current indifference to such a plan, the Canadian investigators have given renewed consideration to it. They have endeavored, in cases of varying severity of nausea and vomiting in pregnancy, to correct the assumed deficiency of carbohydrate supply by administering glucose or lactose, but mainly the latter, and they have supplemented this by a high carbohydrate diet. Duncan and Harding insist that psychologic advantages are not responsible for the good results which they have observed after such treatment. The gratifying report of success in more than seventy cases furnishes a justification for calling attention anew to what is at least a simple procedure in dietotherapy.

THE MODE OF ACTION OF MUSTARD GAS—DICHLORETHYLSULPHID

The veil of secrecy behind which many of the scientific investigations in relation to the prosecution of the war have necessarily and properly been conducted is gradually being lifted. Among the large number of startling items of information thus disclosed, few claim greater medical interest, particularly in respect to novelty and far-reaching significance, than do the war gases. The effects of chlorin attracted attention because this gas was the first to be employed, in the spring of 1915, in that hideous inhumanity known as gas warfare. The interest in chlorin and some of its later substitutes has been eclipsed by the consideration of the so-called mustard gas, dichlorethylsulphid, which had assumed a rôle of primary importance by the time the armistice was signed.

The distinctly local effects of mustard gas have been repeatedly described. They consist mainly of conjunctivitis and superficial necrosis of the cornea; hyperemia, edema, and later necrosis of the skin, leading to a skin lesion of great chronicity; and congestion, and necrosis of the epithelial lining of the trachea and bronchi.

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[1] Duncan, J. W., and Harding, V. J.: A Report on the Effect of High Carbohydrate Feeding on the Nausea and Vomiting of Pregnancy, Canad. M. A. J. 8: 1053 (Dec.) 1918.

[2] Mottram, V. H.: J. Physiol. 38: 281, 1909; 40: 23, 1914.

These localized effects, severe though they may be, have not always seemed to suffice to account for the symptoms that sometimes attend intoxication with mustard gas. Such phenomena as vomiting and diarrhea, hyperexcitability and convulsions, and irregularities of the heart, observed in animals exposed to the deadly vapors, suggest the presence of systemic effects that are due to absorption of the poison into the blood stream and its distribution throughout the organism. This point of view is substantiated by the investigations of E. K. Marshall[1] and his colleagues in the Pharmacologic Research Section of the Medical Division of the Chemical Warfare Service, U. S. Army. Dichlorethylsulphid appears to be excreted in the urine, in part at least, as dihydroxyethylsulphid, a compound devoid of chlorin and shown to be comparatively nontoxic. The lesions of the intestine suggest that excretion of the substance may also take place there.

An outstanding fact about mustard gas is its progressive hydrolysis in aqueous solution whereby it breaks down rapidly to yield hydrochloric acid and residual compounds of low toxicity. Marshall and his associates have therefore attempted to correlate the toxicity of dichlorethylsulphid with the liberated hydrochloric acid. They picture the sequence of events as follows: Dichlorethylsulphid is very slightly soluble in water and very freely soluble in organic solvents, or has a high lipoid solubility or partition coefficient. It would, therefore, be expected to penetrate cells very readily. Its rapid powers of penetration are practically proved by its effects on the skin. Having penetrated within the living cell, it would undoubtedly hydrolyze. The liberation of free hydrochloric acid within the cell would produce serious effects and might account for the actions of dichlorethylsulphid.

Observations made on lower forms of animals likewise favor this hypothesis. Even though the undecomposed "mustard gas" is only slightly soluble in water, its peculiar lipoid-soluble properties enable it to penetrate into cells and presumably collect in relatively high concentration in the cell lipoids and fats of the protoplasm. In this situation, Clowes, Lillie and Chambers[2] remark, the substance serves as a reservoir of toxic material which continually enters solution in the aqueous phases of the protoplasm and is continually being decomposed there. Since, by its hydrolytic decomposition, it yields acid, the dissolved "mustard" acts destructively on the protoplasm as soon as the available buffer compounds (which normally prevent protoplasmic hyperacidity) are exhausted. The destructive action is thus due primarily to the hydrochloric acid freed by hydrolysis. The theory of the intracellular liberation of hydrochloric acid as the mechanism of action is consistent with the known facts of the pathology of mustard gas. Its skin lesion resembles hydrochloric acid burns. Many of the war gases can readily yield an acid by hydrolysis. The toxicity of dimethylsulphate may thus be due to an intracellular liberation of sulphuric acid. The ideal mode of treatment would seem to lie in the use of a basic substance having solubilities and penetrating power like that of mustard gas, but yielding a base on hydrolysis so as to neutralize the acid formed by the war gas. Fortunately, there is no longer need for haste in the search for a perfect antidote of this sort.

OXIDATION IN THE BODY

The answer to the question as to how the all important oxidations in the body are brought about is almost as obscure today as it was a hundred years ago when this mode of energy transformation in the animal organism was first being discussed. Not long ago, in touching on this perplexing subject, reference was made to the view, recently championed by several physiologists, that an enzyme (catalase) having the property of liberating oxygen from peroxids is principally responsible for oxidation in the body.[1] The justification for this contention has been derived essentially from comparisons of the catalase content of the blood in conditions differing essentially in the extent of the oxidative changes that may be assumed to be associated with them. For example, food and exercise promote oxidative metabolism in the organism; the catalase content of the blood was reported to be correspondingly augmented. The association of cause and effect is a mode of reasoning by analogy—always a somewhat doubtful procedure in science; hence the following comment in THE JOURNAL:

> There is a tendency to quote such statements without a due recognition of the limitations to our knowledge contained in them. It is one thing to observe the liberation of oxygen from peroxid in a test tube under the influence of a tissue extract or fluid; quite another problem is concerned in connecting such experimental facts with the complexities of reaction demanded by the known conditions of tissue oxidation. The mechanism of the latter remains, now as before, obscure and a subject for explanation.

In his latest contribution to this subject, Burge,[2] of the University of Illinois, the foremost advocate of the hypothesis that "the increase in oxidation produced by the ingestion of food as in other ways is due to an increase in catalase," has cited further physiologic parallelisms in support of it. In various communications regarding what they term the metabolic gradient underlying intestinal peristalsis, Alvarez and Starkweather,[3] of the University of California, have offered evidence that the catalase content of muscle and of mucous membrane per unit of weight is found to be graded from duodenum to ileum. Here again we can behold an instance of a striking parallelism between muscular performance, rhythmicity and irritability on the one hand, and the presence of catalase on the other.

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[1] Lynch, Vernon; Smith, H. W., and Marshall, E. K., Jr.: On Dichlorethylsulphide (Mustard Gas), I, The Systemic Effects and Mechanism of Action, J. Pharmacol. & Exper. Therap. **12**: 265 (Dec.) 1918.

[2] Lillie, R. S.; Clowes, G. H. A., and Chambers, R.: Preliminary Report of Experiments on the Action of Dichloroethylsulfide (Mustard Gas) on the Cells of Marine Organisms, Science **49**: 382 (April 18) 1919

[1] Oxidation in the Body, editorial, J. A. M. A. **71**: 1316 (Oct. 19) 1918.

[2] Burge, W. E.: The Reason for the Specific Dynamic Action of Protein, Am. J. Physiol. **48**: 133 (March) 1919.

The California investigators actually mention their data as "proof" for the view that the catalase content of a tissue is an index to its metabolic activity. It would assuredly be a fortunate circumstance to possess a suitable method for estimating with great accuracy the oxidative capacity of an organ or tissue in some simpler way than that now afforded by the measurement of respiratory or gaseous exchange. However, accuracy and dependability are a primary desideratum in any procedure of this sort. It is from this standpoint, rather than because of the obscure theoretical basis of the assertion that catalytic power is a measure of the metabolic activity of a tissue, that Becht,[4] of the Department of Pharmacology at the Northwestern University, Chicago, has attacked the thesis. He insists, on the basis of his own experimental researches, that no method has yet been devised which adequately measures the catalytic power of a solid organ. Becht has observed 1,000 per cent. variations in the bloods of different animals under identical conditions, and wide variations in the bloods of animals of different species.

With respect to the effect of thyroid feeding which unquestionably profoundly affects the metabolic performances of the organism, the different observers are by no means in accord. In contrast to Burge,[5] Becht maintains that there is a reduction in the catalytic power of blood during thyroid feeding; this is true not only for the whole blood but for each corpuscle also. Thus, he says, increased catalytic power of the blood cannot explain the loss of flesh during thyroid feeding, either because of the increased oxidation of material in the blood stream, or because of increased loss of catalase to the blood by the tissues, resulting in overactivity of the autolytic ferments, normally held in check by catalase.

Since the catalytic power of the blood varies between such enormously wide limits, from 100 per cent. to 1,000 per cent. in animals of the same species under the same conditions, Becht concludes that the catalases cannot be particularly important, and he does not believe that a study of catalases can possibly explain the mysteries of the processes of oxidation. Wherefore we may reiterate our earlier comment[1] that the mechanism of oxidation remains, now as before, obscure and a subject for explanation.

Current Comment

THE PREFERABLE LOW-CALORY DIETS FOR DIABETICS

In calling attention to the voluminous contributions to our knowledge of the intermediary metabolism of proteins, fats and carbohydrates which have been made in the study of diabetes, Graham Lusk has remarked that the work done is prophetic of possible accomplishment along scientific lines in the study of disease. "It is typical," he adds, "of that 'scientific medicine' which affrights the spirits devoted to a passing empiricism." Enlightened by the newer progress, the chemical pathologist has begun to see in the more severe forms of diabetes not only an incapacity of the organism to care for sugar in the normal fashion but also a more or less pronounced inability to metabolize properly the other foodstuffs that are essential to nutrition. Thus, to quote Lusk again, in the worst picture of the perverted metabolism of diabetes, sugar cannot burn, fat burns only as far as beta-oxybutyric acid; and as for protein, a part of the amino-acids are converted into sugar and another part into beta-oxybutyric acid, neither of which can be burned. For many years fat was the one unrestricted food of diabetics. Some clinicians pushed its use to the limit of endurance in order to keep up the weight of the diabetic patient. It is now understood, however, that liberal ingestion of fat may create or increase ketonuria in both normal and diabetic persons. Although persons may develop a capacity to live on a protein-fat diet free from carbohydrate, the danger of overtaxing the assimilative powers of an organism subjected to it are beginning to be recognized. F. M. Allen,[1] in particular, has given prominence to the menace of overfeeding with fat or of obesity for the diabetic. Allen has succeeding in imitating in dogs the appearance of the spontaneous downward progress observed in human patients. From elaborate studies on both man and animals, he believes it to be conclusively demonstrated that the attempt at high nutrition, even with fat, produces in these dogs an appearance of spontaneous aggravation of condition as striking as anything witnessed in human patients, and that this result can be prevented, at least for periods of years, by limiting the total caloric intake and the body mass to correspond to the assimilative function. The experience with diabetic dogs warns unmistakably against efforts to maintain patients on a luxus level of diet or weight. As Allen says, restriction of single foods, as carbohydrate or protein, suppresses symptoms temporarily; but lightening the total load on the weakened assimilative function is the only present means by which it may be hoped actually to halt the diabetic process. It has lately been argued by Mosenthal and Clausen[2] that probably the lowest diet that will conserve the physical and mental efficiency of the diabetic is that which maintains the nitrogen equilibrium of the patient.

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[3] Alvarez, W. C., and Starkweather, Esther: Am. J. Physiol. **46**: 186 (June) 1918; **47**: 60, 67 (Sept.) 1918.

[4] Becht, F. C.: Observations on the Catalytic Power of Blood and Solid Tissue, Am. J. Physiol. **48**: 171 (March) 1919.

[5] Burge, W. E.: The Effect of Phosphorus Poisoning on the Catalase Content of the Tissues, Am. J. Physiol. **43**: 545 (July) 1917.

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[1] Allen, F. M.: The Rôle of Fat in Diabetes, The Harvey Lectures, Series XII, 1916-1917, Philadelphia, J. B. Lippincott Company, p. 42.

[2] Mosenthal, H. O., and Clausen, S. W.: The Maintenance Diet in Diabetes Mellitus as Determined by the Nitrogen Equilibrium, Arch. Int. Med. **21**: 269 (Feb.) 1918.

This was alleged to be attainable on a carbohydrate-free diet by a food intake of from 1,500 to 2,000 calories, the variations usually depending on the size and the sex of the patient. No attempts were made to determine which of the ingredients of a starch-free dietary, fat, protein or alcohol, was the most efficient protein sparer. A more recent study of diabetic patients in the Medical Clinic of the Johns Hopkins Hospital by Mosenthal and Harrop[3] gives some intimation of the relative values at stake. The cases were only of moderate severity. The outcome, controlled by careful chemical examinations, shows that the addition of an equal number of calories of protein, fat or alcohol to a low-calory carbohydrate-free diet in cases of diabetes mellitus results in the assimilation of considerable amounts of nitrogen when the protein is used, a favorable nitrogen balance in only occasional instances with fat, and no change in the nitrogen equilibrium when alcohol is given. In the opinion of Mosenthal and Harrop, this would point to a high protein diet as the most advisable low-calory, carbohydrate-free diet by which to conserve the body tissues and furnish a maintenance ration for the diabetic.

THE EARLY HISTORY OF MEXICAN TYPHUS (TABARDILLO)

In the City of Mexico few persons are so well known among the scientific people as is Dr. Nicolás León, professor of physical anthropology in the National Museum of Archeology there. Through his visit to this country, some years ago, Dr. León became known to a few for his excellent work in anthropometry and medical history. His "History of Obstetrics in Mexico" down to the year 1910, a book of 740 pages, is a highly original work, based on his own researches and replete with interesting pictures from the Aztec hieroglyphs and the older Catholic publications. His recent papers on the history of Mexican medicine in the *Gáceta Médica de México* are scholarly and exhaustive. Mexico was a kind of pioneer in medicine in the New World. The first hospital in this hemisphere was built by Cortez in the City of Mexico in 1524; the first chair of medicine was established in the University of Mexico about 1578-1580 (The Journal, Oct. 10, 1908). Haller's bibliographies show that the first medical books to be printed in the New World were the "Opera Medicinalia" of Francisco Bravo (Mexico, 1570) and the "Summa y Recopilación de Cirugía" of Alphonso López (Mexico, 1578); the first medical periodical (Dr. León shows) was the "Mercurio Volante" (Mexico, Oct. 17, 1772). In spite of his age and of many losses sustained during the recent revolution, Dr. León has continued his excellent work, as shown by his interesting contribution[4] to the Congreso nacional del tabardillo (Mexico, Jan, 14-21, 1919) on the history of tabardillo or typhus fever which Humboldt, in his American Travels of 1799-1804, noted as existent in Mexico in 1576. Dr. León considers the etymologies of two Aztec words of the nahuatl idiom, viz., *matlazahuatl* and *cocoliztli.* Briefly *matlazahuatl* (*matlatl,* mesh, *zahuatl,* eruption) is the Aztec name for the tableland disease noted by Humboldt; *cocoliztli* (from *cocoa,* to be sick), also employed by the Aztecs as a synonym for tabardillo, would appear to be a general term for an epidemic or plague. Tabardillo (a little cloak) was the expression employed by the Spaniards for typhus as it appeared after the siege of Granada in 1489. The earlier Mexican accounts of tabardillo are to be found in the two books of Bravo (1570) and López (1578) mentioned above. Strange to say, there are no copies of either Bravo or López to be found in Mexico at the present time; both books are exceedingly rare. Another work in manuscript on the epidemic of tabardillo in 1576 by Francisco Hernández "De Morbo Novae Hispanae anni 1576, vocato ab Indiis Cocoliztli") was destroyed in the burning of the Escorial in 1671. Dr. León bases his findings on a medical treatise ("Tractado breve de Medicina") by Friar Agustín Farfán (Mexico, 1592). Here tabardillo is described as a continuous fever with an exanthem (*pintas*), the semeiology being an elaborated casuistry based on the old doctrine of the humors and the treatment "profuse and reiterated bloodletting," with a long list of vegetable remedies. Except in the title, the word *cocoliztli* is not found anywhere in this book. The many Mexican medical authors of subsequent date, cited by León, say substantially the same thing, with more or less prolixity, and nothing new is added prior to the treatises of Anacleto Rodríguez Argüelles (1811) and Luis Montaña (1813). Here the symptomatology is given in greater detail and the nature of the disease becomes more recognizable. The first Mexican epidemic of typhus, in historic time, occurred in the year 1519. Dr. León concludes with a graphic account of the sixth epidemic (1576) by an eye-witness (evidently from an old public document). The effect of the epidemic on the population of the Mexican capital is sensed in the reproduction which Dr. León gives of a painting by the artist P. Miranda, which is strongly suggestive of the illustrations of the horrors of yellow fever in some of our earlier American books.

ONE REASON SCIENTIFIC MEDICINE LAGS

It is a medical journal—so the cover declares—and according to the title page is "the Official Organ of the Mississippi Valley Medical Association, and the Ohio Valley Medical Association." It is said to circulate "among the most progressive physicians of the Middle West." The magazine is well printed, on a fair grade of paper and of neat, if not elaborate, typographic make-up. The advertising (other than that relating to the journal itself) occupies fourteen and one-half pages, or, omitting "reading notices," thirteen pages. More than three fourths of these pages are devoted to advertising proprietary medicines, twenty in all. Eighteen of these proprietaries have been the subject of adverse reports, fifteen by the Council on Pharmacy and Chemistry and three by The Journal. Incidentally, not one of the four articles—readable and worth while—that comprise the "Original Contribution" department is original. Each has been "lifted" from some other source. This, however, by the way, for good articles are a scarce commodity. Just what excuse can be offered for this publication in its present form—and similar publications, for it is but a type—it is difficult to see. It presumes to represent the medical profession, but its only apparent reason for being is as a medium for advertising products, the bulk of which disgrace medicine and degrade therapeutics. These facts are few but discouraging. They furnish at least one explanation — possibly more — for the lukewarm attitude of some manufacturers of proprietary remedies toward the work of the Council on Pharmacy and Chemistry.

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[3] Mosenthal, H. O., and Harrop, G. A.: The Comparative Food Value of Protein, Fat and Alcohol in Diabetes Mellitus as Measured by the Nitrogen Equilibrium, Arch Int. Med. **22**: 750 (Dec.) 1918.

[4] León, Nicolás: ¿Qué era el Matlazahuatl y qué el Cocoliztli en los tiempos precolombinos y en la época hispana? Mexico, 1919.

DUODENAL DIABETES—AN EXPLODED FALLACY

The introduction of the expression "duodenal diabetes" into the literature of medicine is due to the late German physiologist Eduard Pflüger[1] of Bonn. Having observed that section of the intramesenteric nervous connections between the pancreas and duodenum in the frog may, under certain circumstances, give rise to a glycosuria, he called into question the existence of a pancreatic diabetes. Minkowski subsequently silenced this charge against what had been regarded as an established demonstration, by a successful experimental extirpation of the duodenum without producing a state of diabetes so long as a portion of pancreatic tissue was left intact in the body. Duodenectomy is, however, a dangerous procedure; and, since scarcely any cases of prolonged survival of the subjects are on record, the possibility that the duodenum is indispensable for physiologic wellbeing has remained to be definitely considered. Thanks to the ingenious operative procedure described by Moorhead and Landes in a recent issue of THE JOURNAL,[2] complete removal of the duodenum in consecutive operations is permitted. The jejunum is made to serve as a substitute for the duodenum and to receive the pancreatic and biliary secretions through transplanted ducts. The experiments made by the authors at the University of Chicago show that "dogs thus operated on will live in a normal state of health. The duodenum, therefore, is not essential to life." The outcome reminds us of the comment of von Fürth of Vienna on the subject of duodenal diabetes: "Strictly speaking, nothing at all has been gained in this whole campaign fought with an array of heavy artillery of authority and between strategists of note, except the reestablishment of a fact that has long been known—the influence of nervous irritations of all sorts causes the liver to discharge its supply of carbohydrate which sometimes gives rise to glycosuria."[3]

THE HEALTH OF THE ARMY

Statistics published this week in the "Medical Mobilization and the War" department show that the Medical Department of the Army established an enviable record during the war. The yardstick with which to measure the work of this department is the effective list, and the record shows that, on an average, 94.3 per cent. of our army were effective for duty; of the remaining 5.7 per cent., only 3.4 per cent. were on the noneffective list because of disease. The medical corps of an army is put to its hardest test when it follows the army into action. The total number of American soldiers wounded was 195,000, of whom the Medical Corps saved the lives of 182,000; of these there are but few who carry empty sleeves or use artificial legs. And so the figures go: a venereal disease rate lower than that of any of the Allied or enemy forces; typhoid fever practically eliminated, and a rate from even the dread scourge pneumonia that was less than might have been expected under the conditions.

Association News

THE ATLANTIC CITY SESSION

Information Regarding Hotels

Representatives of the Hotel Committee of the Atlantic City Committee of Arrangement will be at the railroad stations in Atlantic City where they may be consulted by Fellows and guests of the Association who have not made their hotel arrangements. Hotel information also will be available at the place of registration, Music Hall on the Steel Pier. The Local Committee of Arrangements gives assurance that there will be no difficulty whatever in securing comfortable hotel accommodations.

Medical Mobilization and the War

Personnel of the Medical Department

For the week ending May 31, there were 15,306 officers in the Medical Corps, a decrease of 491 from the previous week. The Medical Reserve Corps contained 1,961 officers. The total number of medical officers discharged since the beginning of the war is 17,024.

U. S. Army Found Healthiest in History of War

In a modest quarter of Tours in a house built in the 16th century are the sick and wounded records of the American Army—4,300,000 cards that show the health, the wounds, the diseases, the deaths and the recoveries in the American Army. Ninety-four and three-tenths per cent. of the Yank Army was effective for duty at all times, and of the 5.7 per cent. on the noneffective list, only 3.4 per cent. were so rendered by disease. Of the 195,000 Americans wounded, the Medical Corps saved the lives of 182,000.

To date there have been 72,723 deaths in the A. E. F., of which 32,392 were out on the "high field rendezvous," 13,420 of wounds and battle causes, 22,205 of diseases, and 4,806 of accidents and other causes. The venereal rate has been decidedly the lowest of any of the allied or enemy armies, varying from 57 to 34 a year for each thousand of its men, and averaging less than 40 as a whole. Typhoid, which used to be the great scourge of armies, played a very insignificant part in the battle between disease and the American army. There have been only about 1,000 cases altogether and less than half a hundred deaths. Pneumonia replaced it as the most dreaded of diseases. At the time of the armistice, there had been about 8,000 deaths from this disease and influenza in the A. E. F. Epidemic dysentery, although causing only a very few deaths, at one time pervaded our fighting forces to a serious extent.

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[1] Pflüger, E.: Arch. f. d. ges. Physiol. **106**: 181, 1905; **118**: 265, 267, 1907; **119**: 227, 297, 1907; **122**: 267, 1908; **123**: 323, 1908; **124**: 1, 529, 632, 1908; **128**: 125, 1909.

[2] Moorhead, J. J., and Landes, H. E.: Duodenectomy: A New Method, J. A. M. A. **72**: 1127 (April 19) 1919.

[3] Von Fürth, Otto: The Problems of Physiological and Pathological Chemistry of Metabolism, translated by Allen J. Smith, Philadelphia, J. B. Lippincott Company, 1916, p. 251.

In the A. E. F. there were 15,690 officers, 8,587 nurses and 122,473 enlisted men of the Medical Corps; 153 base hospitals, 66 camp hospitals, and 12 convalescent camps. We had 193,000 beds on Nov. 11, 1918, capable of an emergency expansion to 276,000 in case of need. The program of procurement and construction would have assured us by this time of 423,700 beds and an emergency expansion of all kinds of edifices.

Mortality Statistics of the Army

The following figures as to deaths in the United States Army are not absolutely definite, but are subject to some corrections:

ALL TROOPS IN THE UNITED STATES SEPT. 1, 1917, TO MAY 2, 1919

Average strength 1,130,052

	Number of Deaths	Annual Rate per 1,000
All causes	34,729	18.369
External causes	1,552	0.821
Suicides	207	0.110
Other external causes	1,344	0.711
Wounds received in action	1	0.000
Disease only	33,177	17.548
Pneumonia	27,074	14.320
Meningitis	1,190	0.629
Typhoid fever	51	0.003
Tuberculosis	760	0.401
Dysentery	17	0.001
Measles	89	0.005
Scarlet fever	88	0.005
Empyema	361	0.191
Septicemia	172	0.091
Influenza	1,1877	0.627
Other diseases	2,188	1.157

AMERICAN EXPEDITIONARY FORCES, FRANCE, OCT. 18, 1917, TO MAY 2, 1919

Average strength 991,344

	Number of Deaths	Annual Rate per 1,000
All causes	62,205	40.78
External causes	45,970	30.14
Suicides	36	0.023
Wounds received in action	44,056	28.887
Other external causes	1,878	1.232
Disease only	16,235	10.64
Pneumonia	12,661	8.301
Meningitis	947	0.621
Typhoid fever	162	0.106
Tuberculosis	460	0.302
Dysentery	25	0.016
Measles	30	0.020
Scarlet fever	79	0.052
Empyema	136	0.089
Septicemia	112	0.074
Influenza	209	0.137
Other diseases	1,414	0.927

ALL TROOPS IN THE UNITED STATES, SEPT. 1, 1917, TO MAY 1, 1919, PLUS ALL TROOPS IN THE AMERICAN EXPEDITIONARY FORCES, FRANCE, OCT. 18, 1917, TO MAY 2, 1919

Average strength 2,121,396

	Number of Deaths	Annual Rate per 1,000
All causes	96,934	28.849
External causes	47,522	14.525
Wounds received in action	44,057	13.501
Suicides	243	0.007
Other external causes	3,222	0.955
Disease only	49,412	14.324
Pneumonia	39,735	11.509
Meningitis	2,137	0.625
Typhoid fever	213	0.064
Tuberculosis	1,220	0.263
Dysentery	42	0.001
Measles	119	0.034
Scarlet fever	167	0.049
Empyema	497	0.143
Septicemia	284	0.083
Influenza	1,396	0.398
Other diseases	3,602	1.050

HONORABLE DISCHARGES, MEDICAL CORPS, U. S. ARMY

NOTE.—In the following list, L. signifies lieutenant; C., captain; M., major; L. C., lieutenant-colonel, and Col., colonel.

ALABAMA

Gadsden—Ralls, A. W. (C.)
Mobile—Agnew, J. H. (M.)
Ramer—Athey, C. R. (L.)
Selma—Skinner, M. (C.)

ARIZONA

Miami—Slaughter, T. H. (L.)

ARKANSAS

Fort Smith—Hoge, A. F. (L.)

CALIFORNIA

Berkeley—Betts, I. H. (L.)
Dixon—Morrison, H. E. (C.)
Fowler—Ehlers, H. (L.)
Los Angeles—Bowen, F. P. (C.)
Gallagher, H. M. (L.)
Phillips, C. E. (M.)
Shelton, B. (C.)
Pasadena—Murray, H. W. (C.)
Riverside—McPheeters, G. C. H. (M.)

COLORADO

Central City — Ashbaugh G. A. (L.)
Denver—Carmody, T. E. (M.)
Pueblo—Thompson, J. W. (L.)
Trinidad—Chisholm, A. J. (C.)

CONNECTICUT

Bridgeport—Adams, F. J. (M.)
Colebrook—Horrax, G. (M.)
Hartford—Deming, C. D. (L.)
Kircher, R. F. A. (C.)
Marbledale—Denslow, M. H. (L.)
New Haven — Comford, C. W., Jr. (M.)
Romford—Harvey, S. C. (M.)

DISTRICT OF COLUMBIA

Washington — Littlepage, W. H. (L. C.)
Mallory, W. J. (C.)

FLORIDA

St. Petersburg—Knowlton, R. H. (L.)

GEORGIA

Atlanta—Carter, H. G. (L.)
Douglas—Sibbett, W. A. (L.)
Marshallville — Frederick, D. B. (C.)

ILLINOIS

Alton—Robertson, A. P. (L.)
Chicago—Carter, T. A. (L.)
Copeland, N. (L.)
Eisenstaedt, J. S. (L.)
Gibson, W. S. (C.)
Koch, S. L. (M.)
Lebowitz, J. J. (C.)
McArthur, S. W. (C.)
Nadler, W. H. (M.)
Rice, W. P. (C.)
Sieweth, W. S. (L.)
Silver, M. J. (L.)
Weisskopf, M. A. (C.)
Woodard, H. B. (M.)
Danville—Bird, J. T. B. (C.)
Elgin—Walsh, J. J. (L.)
Evanston—Woodyatt, R. T. (M.)
Freeport—Stealy, C. L. (C.)
Leland—Chapman, W. E. (C.)
Lexington—Lindsay, C. E. (C.)
Marshall—Bradley, S. C. (C.)
Oak Park — Trowbridge, C. W. (L.)
Peoria—Pintler, H. E. (C.)
Quincy—Eaton, R. W. (C.)
Stevenson, W. D. (C.)
Toulon—Chase, M. R. (M.)

INDIANA

Elkhart—Work, J. A., Jr. (C.)
Fort Wayne—Bruggeman, H. O. (L. C.)
Indianapolis — Doeppers, W. A. (L.)
Van Osdol, H. A. (C.)
Richmond—Fouts, J. M. (C.)

IOWA

Cedar Rapids — Olmsted, W. H. (L.)
Davenport—Schroeder, P. H. (C.)
Dubuque—Bock, A. V. (M.)
Garner—Bemis, G. A. (C.)
Greeley—Kresensky, W. W. A. (L.)
Keokuk—Gray, H. A. (M.)
Pella—Sybenga, J. J. (L.)
Sioux City—Swanson, J. E. (C.)
Spirit Lake — Geissinger, J. D. (C.)
Troy—Prentice, G. L. (C.)

KANSAS

Concordia—Weaver, R. E. (C.)
Ellinwood—Wheeler, L. J. (L.)
Freeport—Mills, C. D. (L.)
Mulvane—Shelly, H. G. (C.)
Newton—Glover, H. M. (C.)
Parsons—Crump, T. E. (L.)
Salina—Fitzpatrick, C. M. (C.)
Topeka—Miller, R. J. (L.)
Washington—Smith, H. D. (M.)

LOUISIANA

New Orleans—Terhune, W. B., Jr. (L.)
Oakdale—Palmer, A. T. (L.)

MAINE

Guilford—Dore, G. E. (L.)
South Windham—Whitney, H. R. (L.)
Swans Island—Fuller, A. J. (L.)

MARYLAND

Baltimore—Benson, E. H. (C.)
Galvin, T. K. (L.)
Queenstown—Price, S. J. (L.)
Raspeburg—Wilkinson, A. L. (L.)

MASSACHUSETTS

Athol—Gleason, B. W. (C.)
Belmont—Cunningham, E. A. (C.)
Boston—Green, M. C. (L.)
Lane, J. W. (L. C.)
Lee, W. T. (M.)
Nielsen, E. B. (M.)
Fall River — Blanchette, W. H. (L.)
Gloucester — Malonson, J. H. (C.)
Greenfield—Canedy, C. F. (C.)
Harding—McPherson, G. E. (M.)
Malden—McCarthy, E. J. (C.)
Newton—Dempsey, J. E. (L.)
Quincy—Jones, F. E. (L. C.)
Springfield—Gilcrest, J. M. (L.)
Worcester—Oberg, F. T. (L.)

MICHIGAN

Detroit—Erkfitz, A. W. (L.)
Foden, G. S. (M.)
Lovering, W. J. (L.)
Poston, H. P. (L.)
Rohde, P. C. (C.)
Grand Rapids — Hodgen, J. T. (M.)
Smith, A. B. (C.)
Mount Clemens — Martin, C. A. (L.)
Stanwood—Campbell, J. B. (C.)

MINNESOTA

Gilbert—Barrett, F. (C.)
Lewisville—Barickman, R. I. (L.)
Minneapolis—Macnie, J. S. (C.)
Rochester—Melson, O. C. (C.)
Sutton, G. E. (C.)
St. Paul—Engberg, E. J. (C.)
Winona—Lindsay, W. V. (M.)
Winsted—Clair, J. B. (L.)

MISSISSIPPI

Corinth—Caldwell, G. A. (C.)
Hattiesburg—Lewis, H. S. (M.)

MISSOURI

Kansas City—George, J. H. (C.)
LaRue, H. M. (C.)
Leonard, A. C. (L.)
Weaver, J. S. (C.)
Kennett—McKay, J. C. (L.)
St. Louis—Clopton, M. B. (L. C.)
Coughlin, W. T. (L. C.)
Ernst, E. C. (M.)
Fisher, R. F. (C.)
Gilbert, W. W. (M.)
Kopelowitz, J. C. (L.)
Lehman, E. P. (L.)
Stewart, J. E. (L.)
Sullivan—Eyermann, C. H. (C.)

MONTANA

Butte—Loring, F. W. (C.)
Red Lodge — Brinkman, W. F. (C.)

NEBRASKA

Lincoln—Breuer, M. J. (L.)
Covey, G. W. (L.)
Walker, G. H. (C.)
Omaha—Bridges, E. L. (M.)

Omaha—Hull, C. A. (M.)
Riggert, L. O. (C.)
Pickrell—Sigler, M. T. (L.)

NEW HAMPSHIRE

Dover—Chapman, E. L. (L.)
East Jaffrey—Sweeney, F. C. (C.)
Manchester—Jones, E. A. (L.)
Lovely, B. H. (C.)

NEW JERSEY

Cedar Grove—Payne, G. (C.)
Englewood—Bell, A. L. L. (L.)
Passaic—Szymanski, J. J. (L.)
South Orange—Albee, G. C. (M.)
Trenton—Reddan, M. W. (M.)

NEW YORK

Bridgehampton—Gilbert, E. C. (C.)
Bronx—Grad, I. (L.)
Brooklyn—Goodfellow, E. H. (L.)
Walker, A. A. (L.)
Buffalo—Frost, C. G. (L.)
Lackawanna—Robinson, R. (L.)
Lockport—Hurlbut, L. R. (M.)
Lyndonville—Fraser, D. E. (C.)
New Rochelle—Beck, A. L. (C.)
New York—Carroll, W. E. (L.)
Handleman, W. M. (L.)
Hansen, E. (M.)
Hunt, J. R. (M.)
Jameson, J. W. (L. C.)
Lane, M. P. (M.)
Lopez de la Rosa, L. (L.)
McEveety, C. L. (L.)
Morton, J. J. (M.)
O'Connell, W. M. (L.)
Richer, O. H. (L.)
Salmon, T. W. (Col.)
Stern, E. (L.)
Urdang, J. (L.)
West, D. (C.)
Niagara Falls—Talbot, F. J. (C.)
Rochester—Orchard, N. G. (C.)
Rosenthal, S. H. (M.)
Utica—Grant, A. R. (M.)
Yonkers—Paterson, D. C. (C.)

NORTH CAROLINA

Jonesboro—McIver, E. M. (L.)
New Bern—Lupton, C. H. (L.)
Rutherfordton — Scruggs, W. M. (C.)
Walnut Cove—Jones, B. N. (C.)
Wilmington—Bullock, E. S. (L.)

NORTH DAKOTA

Cavalier—Short, C. A. (C.)
Grafton—Glaspel, C. J. (C.)
Hazleton—Monteith, G. (L.)
Park River — Robertson, C. W. (L.)

OHIO

Akron—Grim, J. (C.)
Cincinnati—Gillespie, W. (L. C.)
Lindenberger, L. N. (C.)
Lippert, A. B. (C.)
Columbus—Denser, C. H. (C.)
Eckstrom, J. B. C. (M.)
Faulder, G. B. (C.)
Dayton—Roush, F. W. (C.)
East Liverpool — Davis, F. F. (L.)
Fostoria—Henry, C. A., Jr. (C.)
Hamilton—Rogers, W. N. (C.)
Lima—Herr, A. H. (C.)
Toledo—Andrews, S. B. (L.)
Girardot, A. J. (M.)
Levison, L. A. (C.)
Van Wert—Church, C. G. (C.)
Woodstock—Sharp, W. H. (L.)

OKLAHOMA

Balko—Stout, W. (L.)
Chandler—Bisbee, W. G. (C.)
Claremore—Means, J. F. (L.)
Oklahoma City — Bolend, R. G. (M.)
Howard, R. M. (M.)
Ponca City—Newlon, B. F. (L.)

OREGON

Portland—Blackford, H. (L.)
Greene, H. M. (M.)
Watkins, R. E. (L.)

PENNSYLVANIA

Clearfield—Stewart, L. F. (C.)
Erie—Weibel, E. G. (C.)
Harrisburg—Dapp, G. A. (L.)
McDonald—Stewart, W. S. (C.)
Monaca—McKinley, A. S. (L.)
Monessen—Gemmill, W. P. (L.)
Philadelphia — Benedict, F. D. (L.)
Pittsburgh — Buchanan, E. P. (L.)
Kenney, H. F. (L.)
Simon, D. L. (L.)
Reading—Shearer, W. L. (L.)
Ridgeway—Shaw, W. C. (C.)
Sweet Valley—Rummage, L. C. (L.)
Vandergrift Heights — Copeland, W. A. (C.)

SOUTH CAROLINA

Charleston—Miller, T. E., Jr. (C.)
Elk Point—Henkin, J. (C.)

TENNESSEE

Chattanooga—DeLay, E. M. (L.)
Dyersburg—Motley, R. L., Jr. (L.)
Memphis—Jetton, M. M. (L.)
Nashville — Billington, R. W. (M.)
Pickens, D. R. (C.)

TEXAS

Ballinger—Love, A. S. (C.)
Celina—Hailey, E. L. (L.)
Dallas—Ford, J. F. (C.)
Shortal, W. W. (C.)
Houston—Murray, E. C. (L.)
Lufkin—Hawkins, J. W. (C.)
New Braunfels—Wright, R (C.)
Oakwood—Carter, C. J., Jr. (L.)

VIRGINIA

Abingdon—Litchfield, G. V. (C.)
Hampton—Parker, P. J. (M.)
Hemp—Patton, H. W. (L.)
Mathews—Hoskins, R. R. (C.)
Petersburg—Nisbet, J. I. (L.)

WASHINGTON

Hoquiam—Hurley, G. I. (C.)
Olympia—Partlow, K. L. (C.)
Ridgefield—Stryker, R. S. (M.)
Spokane — Eikenbary, C. F. (L. C.)
Uniontown—Burg, W. A. (C.)

WEST VIRGINIA

Ellenboro—Corbin, E. A. (L.)
Montgomery—Hodge, O. W. (L.)

WISCONSIN

Ashland—Harrison, G. W. (L.)
Merrill—Ravn, E. O. (C.)
Milwaukee—Nelson, J. D. (L.)
Winnebago—Rowley, C. C. (C.)

MEDICAL OFFICERS, U. S. NAVY, RELIEVED FROM ACTIVE DUTY

CALIFORNIA

Los Angeles—Fearon, W. M.
Langan, A. J.
San Diego—Wier, T. F.
San Francisco—Ashmore, F.
Cline, G. W.
Hund, E. J.
McNulty, A. H.
Santa Rosa—Herrick, A. B.

DISTRICT OF COLUMBIA

Washington—Langhorne, C. D.

GEORGIA

Atlanta—Ratliffe, J. W.
Waycross—Lott, W. M.

ILLINOIS

Chicago—Emery, C. E.
Healy, M. E.
Rock Island—Frey, H.
Sandwich—Wallace, J. H.

KANSAS

Sublette—Miner, O. W. M.

KENTUCKY

Madisonville—Thompson, A. L.

LOUISIANA

New Orleans—Ward, R. R.

MARYLAND

Baltimore—Baldwin, A., Jr.

MASSACHUSETTS

Chelsea—Loewe, W. R.
Hatfield—Hubbard, R. E.
Indian Orchard—Riordan, A. H.

MICHIGAN

Detroit—Hulbert, H. S.
Palm, G. W.

MINNESOTA

Lake Park—Snell, A. M.
Minneapolis—McCarthy, D.

MISSOURI

Kansas City—Calloway, L. M.
St. Louis—Lavan, J. L.

NEBRASKA

Lincoln—Delzell, W. R.

NEW JERSEY

Jersey City—Enright, J. G.

NEW YORK

Kings Park—Patiky, J. G.
New York—Messing, A.

OHIO

Toledo—McNierney, F. B.

OREGON

Portland—Landis, R. P.

PENNSYLVANIA

Adah—Brown, H. S.
Philadelphia—Best, P. W.
Cleveland, F. M.
Doebele, W. A.
Gorman, L. R.
Righter, H. M.
Thomas, G. A.
Scranton—O'Malley, W. J.

SOUTH CAROLINA

Hyman—Finklea, O. T.

VIRGINIA

Hopewell—Hertzberg, H.

WASHINGTON

Seattle—Lea, J. M.
Maxson, F. T.
McCurdy, R. J.

ORDERS TO OFFICERS OF THE MEDICAL CORPS, U. S. ARMY

Alabama

To Army Medical School for instruction, from Camp Custer, Capt. R. D. BROWN, Mobile.

To Fort McPherson, Ga., from Camp Dix, Lieut. F. W. YOUNG, Hartford.

California

To Camp Kearney, Calif., camp hospital, from Fort Sill, Lieut. R. A. CARTER, Los Angeles.

To Camp Zachary Taylor, Ky., from Fort Riley, Lieut. H. W. SPIERS, Los Angeles.

To Denver, Colo., from Camp Lewis, Capt. D. R. SMITH, Talmage; from Whipple Barracks, Major O. D. ANDERSON, Ocean Park.

To Fort Des Moines, Iowa, from Camp Kearney, Lieut. H. J. WRIGHT, San Francisco.

To Fort Sheridan, Ill., from Camp Kearney, Major C. E. SISSON, Norwalk.

To Hoboken, N. J., from San Francisco, Major W. M. ARCHER, Jr.

To report to the commanding general, American Expeditionary Forces, from Camp Kearney, Lieut.-Col. H. P. CARTER. Western Department, from Camp Kearney, Major E. L. WEMPLE, San Francisco.

To San Francisco, Calif., Letterman General Hospital from Charlestown, Major L. F. LUCKIE, Los Angeles.

Colorado

To Denver, Colo., from Camp Kearney, Major G. E. ORSBORN, Denver.

To Newport News, Va., Major P. WORK, Pueblo.

Connecticut

To Fox Hills, N. Y., from Colonia, Lieut. R. C. PAINE, Thompson.

Delaware

To Eastview, N. Y., from Camp Upton, Lieut. J. G. SPACKMAN, Wilmington.

District of Columbia

To New Haven, Conn., from Surgeon-General's Office, Capt. E. L. COOK.

Florida

To Baltimore, Md., from Atlanta, Capt. J. F. WILSON, Lakeland.

To report to the commanding general, Hawaiian Department, from Camp Meigs, Lieut. W. L. NUTTER, Lake Worth. Northeastern Department, from Camp Upton, Major J. D. GRIFFIN, Lakeland.

Georgia

To Camp Benning, Ga., from Camp Dix, Lieut. L. W. SHAW, Savannah.

To report to the commanding general, Hawaiian Department, from Camp Gordon, Capt. H. L. CONNER.

Idaho

To report to the commanding general, Central Department, *from* Fort Riley, Major W. H. TUKEY, Emmett.

Illinois

To Camp Dix, N. J., from Fort Riley, Lieut. C. M. BACON, Chicago.

To Camp Meade, Md., from Fox Hills, Capt. G. U. LIPSHULCH, Chicago.

To Chicago, Ill., from Otisville, Capt. R. H. HENDERSON, Chicago.

To Fort Sheridan, Ill., from Camp Bowie, Lieut. C. H. WIENEKE, Chicago; from Camp Lee, Lieut. H. SERED, Chicago; from Lakewood, Lieut. D. C. SUTTON, Chicago; from Washington, *D. C., Major* E. A. GRAHAM, Chicago.

To Fox Hills, N. Y., from Williamsbridge, Capt. G. C. TALLERDAY, Chicago.

To Hampton, Va., from Fort McPherson, Lieut. D. D. CAMPBELL, Chicago.

To Hoboken, N. J., Capts. E. O. BROWN, Clayton; S. H. RICHMAN, Oak Forest.

To Oteen, N. C., from Boston, Lieut. I. PILOT, Chicago.

To Otisville, N. Y., from Camp Upton, Capt. W. J. RIDEOUT, Freeport.

To Walter Reed General Hospital, D. C., from Hoboken, Lieut. S. S. SCHOCHET, Chicago.

Indiana

To Biltmore, N. C., from Camp Dodge, Lieut. F. A. KIMBLE, Anderson.

To Cooperstown, N. Y., from Fort McHenry, Lieut. B. J. PETERS, Kokomo.

Kansas

To Biltmore, N. C., from Fort Oglethorpe, Lieut. J. RUDBECK, Seneca.

To Camp Grant, Ill., from Camp Bowie, Lieut. O. O. MOORE, Topeka.

To Fort D. A. Russell, Wyo., from Fort Riley, Capt. J. M. SUTTON, Lincoln.

To Fort Sill, Okla., from Fort Riley, Lieut. C. H. SMITH, Pittsburg.

To report to the commanding general, Southern Department, from Camp Dix, Major J. E. HEWITT, Wakefield.

To Walter Reed General Hospital, D. C., from Camp Dix, Capt. J. W. SPEARING, Norcatur.

Kentucky

To Camp Shelby, Miss., as tuberculosis examiner, from New Haven, Capt. V. A. HARL, Owensboro.

Louisiana

To Camp Meade, Md., from Walter Reed General Hospital, Lieut. R. S. KEMP, New Orleans.

To Spartanburg, S. C., from Camp Bowie, Capt. S. O. TURNER, De Ridder.

Maine

To Fox Hills, N. Y., from Fort McPherson, Capt. D. B. CRAGIN, Waterville.

Maryland

To Army Medical School, from Camp Meade, Lieut.-Col. H. C. PILLSBURY.

To report to the commanding general, American Expeditionary Forces, from Colonia, Lieut. D. F. ELMENDORF, Baltimore. From Fort McHenry, Major C. L. BEAVEN.

To Walter Reed General Hospital, D. C., from Camp Dix, Lieut. J. T. KING, Jr., Baltimore.

To Washington, D. C., Surgeon-General's Office, from Camp Shelby, Miss., Lieut. L. P. HOLMES, Baltimore.

Massachusetts

To Cape May, N. J., from Lakewood, Lieut. T. B. RAFFERTY, Lynn.

To East Norfolk, Mass., from Lakewood, Capt. S. F. CURRAN; Lieut. T. E. BUCKMAN, Boston.

To Eastview, N. Y., from Camp Dix, Lieut. G. A. BUCKLEY, Brockton.

To Fox Hills, N. Y., from Camp Upton, Capt. R. H. SIMMONS, Fall River; from Fort McHenry, Lieut. J. G. HEGARTY, Boston.

Michigan

To Hoboken, N. J., Capt. A. W. GHOREYEB, Boston.

To Camp Abraham Eustis, Va., camp hospital, from Biltmore, Capt. R. P. STARK, Allegan.

To Camp Custer, Mich., from Detroit, Lieut. L. B. COWEN, Detroit.

To Camp Sherman, Ohio, from Detroit, Lieut. I. I. BITTKER, Detroit.

Minnesota

To Denver, Colo., from Camp Dodge, Capt. F. W. SPICER, Duluth.

To Fort Snelling, Minn., from Camp Lee, Capt. P. A. HIGBEE, Minneapolis.

Missouri

To Camp Grant, Ill., base hospital, from Camp Shelby, Capt. A. S. HEITHAUS, St. Louis.

To Camp Zachary Taylor, Ky., base hospital, from Fort Snelling, Lieut. V. S. DANGERFIELD, Luray.

To Eastview, N. J., from New Haven, Lieut. B. W. LEWIS, St. Louis.

To Fort D. A. Russell, Wyo., from Fort Riley, Capt. F. COHEN, Kansas City.

To St. Louis, Mo., from Camp Bowie, Capt. F. J. SULLIVAN, St. Louis; from Camp Dix, Lieut. J. C. ROTTER, St. Louis.

The following order has been revoked: *To Fort Riley*, from Plattsburg Barracks, Capt. H. M. LaRUE, Kansas City.

Montana

To Camp Grant, Ill., from Camp Lewis, Capt. B. P. BLACKSTONE, Lindsay.

Nebraska

To Fort Riley, from Camp Dix, Capt. J. J. HOMPES, Lincoln.

The following order has been revoked: *To Camp Dodge, Iowa*, base hospital, for instruction, Lieut. O. H. HAHN, Hastings.

New Hampshire

To Camp Devens, Mass., from Camp Zachary Taylor, Major A. F. WHEAT, Manchester.

New Jersey

To Camp Dix, N. J., as cardiovascular and tuberculosis examiner, from Camp Upton, Lieut. A. A. MUTTER, Arlington.

To Camp Meade, Md., as camp surgeon, from Camp Dix, Col. J. B. HUGGINS.

To Eastview, N. Y., from Colonia, Lieut. G. W. FINKE, Hackensack.

To Fort Monroe, Va., from Lakewood, Col. C. F. MASON.

To Governors Island, N. Y., from San Francisco, Lieut. R. R. REED, Morristown.

To Hampton, Va., from Camp Meade, Lieut. W. G. SHEMELEY, Jr., Camden.

To New Haven, Conn., from Camp Dix, Capt. E. H. HOWELL.

To report to the commanding general, American Expeditionary Forces, from Colonia, Lieut.-Col. C. L. GANDY. Hawaiian Department, from Northeastern Department, Major C. L. VREELAND, Pompton Lakes.

New Mexico

To Camp Meade, Md., from Spartanburg, Capt. S. H. ECKLES, Silver City.

New York

To Biltmore, N. C., from Camp Jackson, Lieut. H. COWAN, New York.

To Camp A. A. Humphreys, Va., from Quantico, Va., Lieut. O. N. LaROTONDA, New York.

To Camp Custer, Mich., from Fort McHenry, Capt. W. G. BOWERMAN, New York.

To Camp Devens, Mass., from Colonia, Lieut. A. B. PEMSLER, New York. Base hospital, from Camp Meade, Lieut. I. S. STARTZ, New York; from Camp Upton, Lieut.-Col. J. M. SWAN, Rochester.

To Camp Dix, N. J., from Fort Riley, Lieuts. F. C. BALDERREY, Ithaca; J. F. LEWIS, New York.

To Camp Dodge, Iowa, base hospital, from Boston, Lieut. F. W. PALMER, Buffalo.

To Camp Grant, Ill., from Camp Upton, Lieut. C. G. IRISH, New York.

To Camp Lee, Va., from Camp Upton, Lieut. W. F. C. STEINBUGLER, Brooklyn.

To Fort McHenry, Md., from Camp Pike, Lieut.-Col. J. H. McHENRY, New York.

To Fox Hills, N. Y., from Camp Dix, Lieut. R. C. LOWRY, New York.

To Hoboken, N. J., from Williamsbridge, Major W. P. DAVENPORT.

To Mineola, N. Y., for instruction, as flight surgeon, from Camp Devens, Lieut. J. F. BOURKE, Jamaica.

To Pittsburgh, Pa., from Lakewood, Lieut. A. R. SHIRLEY, New York.

To Walter Reed General Hospital, D. C., from Rochester, Lieut. W. D. GILL, New York.

The following orders have been revoked: *To Camp Sherman, Ohio*, base hospital, from Camp Dix, Capt. W. J. TRACY, Hornell. *To Detroit, Mich.*, from Camp Jackson, Capt. H. A. GRIFFIN, New York. *To Fort Des Moines, Iowa*, from Camp Dix, Lieut. J. L. LINN, Brooklyn. *To Hoboken, N. J.*, from Camp Sherman, Lieut. H. J. FEASTER, Brooklyn.

North Carolina

To Oteen, N. C., from Camp Jackson, Major R. A. CAMPBELL, Statesville.

To report to the commanding general, Southeastern Department, from Camp Wadsworth, Capt. R. W. SPICER, Goldsboro.

The following order has been revoked: *To Camp Grant, Ill.*, base hospital, from Camp Dix, Capt. L. F. MAGRUDER, Albemarle.

Ohio

To Camp Kearney, Calif., as camp surgeon, from Toledo, Lieut.-Col. G. H. McCLELLAN.

To Camp Sherman, Ohio, from Camp Dodge, Major A. H. DUNN, Chillicothe; from Cincinnati, Capt. A. E. OSMOND, Cincinnati. Base hospital, from Camp Custer, Lieut. E. D. JACKSON, Georgetown; from Camp Dix, Capt. L. N. OSSMAN, Cleveland.

To Camp Zachary Taylor, Ky., base hospital, from Camp Dix, Lieut. S. F. HAUSER, Cincinnati.

To Fort Thomas, Ky., as cardiovascular and tuberculosis examiner, from Camp Upton, Lieut. H. B. WEISS, Cincinnati.

To report to the commanding general, Southern Department, from Oglethorpe, Lieut. T. W. MAHONEY, Springfield.

Oklahoma

To Fort Sill, Okla., from Camp Dix, Lieut. C. N. BERRY, Norman.

To Indianapolis, Ind., from Fort Sill, Lieut. S. G. ODOM.

Oregon

To Eastview, N. Y., from Camp Dix, Capt. G. L. HYNSON, Portland.

To Hoboken, N. J., from San Francisco, Capt. W. C. MUNLY, Portland.

Pennsylvania

To Camp Dix, N. J., base hospital, from Boston, Capt. J. A. BROOKE, Philadelphia; from Lakewood, Capt. J. H. GALBRAITH, Altoona.

To Camp Jackson, S. C., from Lakewood, Lieut. R. GOODMAN, Philadelphia.

To Camp Meade, Md., from Camp Travis, Lieut. S. W. REEVES, Fawn Grove.

To Carlisle, Pa., from Camp Jackson, Major S. S. BURG, Northumberland.

To Colonia, N. J., from Walter Reed General Hospital, Major C. C. YOUNT, Philadelphia.

To Hampton, Va., from Fort McPherson, Capt. G. P. ARD, Woodward.

To Hoboken, N. J., from Carlisle, Major D. N. W. GRANT.

To Oteen, N. C., from New Haven, Lieut. J. K. ANDERSON, Pittsburgh.

To Pittsburgh, Pa., from Lakewood, Lieut. J. W. MITCHELL, Pittsburgh.

To report to the commanding general, Eastern Department, from Camp Dix, Capt. R. H. KING, Pittsburgh. Philippine Department, from Camp A. A. Humphreys, Capt. S. H. HELLER, Lancaster.

To Walter Reed General Hospital, D. C., from Camp Dix, Capt. P. B. STEELL, Pittsburgh; from Lakewood, Lieut L. N. GAY, Shamokin. For instruction, from Camp Devens, Lieut. P. L. COOK, Philadelphia.

South Carolina

To Camp Gordon, Ga., base hospital, from Camp Sherman, Lieut. H. H. HARRIS, Anderson.

South Dakota

To Camp Meade, Md., from Western Department, Major A. M. GIFFIN, Rapid City.

Tennessee

To Fort Riley, base hospital, from Camp Lee, Capt. J. E. LACY, Jasper.

To Hoboken, N. J., from Camp Dix, Lieut. J. C. BLANKENSHIP, Halls.

To New Haven, Conn., from Camp Jackson, Major A. S. DABNEY, Nashville.

Texas

To Camp Dodge, Iowa, base hospital, from Fort Snelling, Capt. C. F. CLAYTON, Lubbock.

To Camp Travis, Texas, to examine the command for nervous and mental disease and on completion *to Fort Sam Houston, Texas*, base hospital, from Fort McPherson, Lieut. D. C. BURKES, San Antonio.

To Fort Bayard, N. M., from Camp Dix, Capt. W. A. VEE CASH, Abilene.

To Fort Bliss, Texas, from Camp Bowie, Major H. CLARK, Crowell.

To Fort D. A. Russell, Wyo., as tuberculosis examiner, from Denver, Lieut. C. R. GOWEN, Carlsbad.

To Fort Sam Houston, Texas, from Camp Dix, Lieut. J. W. GOODE, San Antonio; from Camp Lee, Capt. L. E. McADON, San Antonio; from Camp Travis, Lieut. C. M. COVINGTON, Montgomery.

To Hoboken, N. J., from Newport News, Lieut. L. S. JOHNSON, Richmond.

To report to the commanding general, Southern Department, from Camp Bowie, Capt. D. C. WYLIE, Asperton.

Virginia

To Camp Lee Va., from Camp Dix, Major A. T. FINCH, Chase City.

To Eastview, N. Y., from Lakewood, Lieut. J. W. ROBERTSON, Onancock.

To Washington, D. C., Surgeon General's Office, from Philadelphia, Major J. W. H. POLLARD, Lexington.

Washington

The following orders have been revoked: *To Fort D. A. Russell, Wyo.,* from Camp Lewis, Lieut. H. J. HARDS, Tacoma. *To Fort Des Moines, Iowa,* from Camp Dix, Lieut. H. T. BUCKNER, Seattle.

Wisconsin

To Camp Grant, Ill., as tuberculosis examiner, from Camp Lewis, Lieut. L. F. RUSCHHAUPT, Milwaukee.

To Camp Meade, Md., from Dover, Capt. P. L. SCANLAN, Prairie du Chien.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ALABAMA

Marriage Law in Effect.—The new law requiring all men seeking marriage licenses to undergo a physical examination within fifteen days before the issue of the license went into effect, April 21.

Hospital Items.—The Pike County Masonic Hospital has been incorporated at Troy with a capital stock of $40,000. A lot at Pine and Walnut Streets, donated by Fox Henderson & Sons, will be used for the site of the hospital.——The Fraternal Hospital, Birmingham, has been incorporated with a capital stock of $50,000.——At a special meeting of the Memorial Hospital Committee, Montgomery, held April 21, it was decided to raise $200,000 for the erection of a city hospital to be called the Montgomery Memorial Hospital. Of the amount needed, $85,000 has already been secured.

ARKANSAS

Personal.—Dr. Francis T. Isbell, Horatio, retiring president of the state board of medical examiners of the Arkansas Medical Society, was presented with a silver loving cup by the members of the board, May 14.——Dr. Charles A. Arkebauer, Little Rock, senior surgeon of the State Hospital for Nervous Diseases, Little Rock, has been appointed assistant superintendent, to succeed Dr. Roland F. Darnall, who has resigned.——Drs. James G. Townsend and Morgan Smith have been elected members of the board of health of Little Rock.——Dr. Aaron A. McKelvey, Fort Smith, has been elected district health officer by the district board of health.——Dr. Fred C. Rowell has been elected city physician of Pine Bluff.——Drs. William C. Russwurm and Aris W. Cox have been appointed members of the board of governors of the Helena Hospital.——Dr. Percy A. Riddler has been appointed a member of the Fort Smith District Board of Health.

CALIFORNIA

Tax Refund.—Senate Bill No. 405, introduced by Senator Sharkey of Martinez, has been passed by the legislature and signed by the governor. This act authorizes the stated board of medical examiners to refund taxes, fees and penalties collected by mistake, error, or inadvertence, and provides an appropriation therefor. The provisions of this bill become effective ninety days after the adjournment of the legislature. The attorney-general has rendered an opinion permitting the board of medical examiners to exempt from payment of the $2 annual tax thoses licentiates who gave their services to the national government during the recent war as commissioned medical officers in the U. S. Army, Navy or Public Health Service. Such licentiates are exempt from payment of this charge while in the discharge of their official duties. If a licentiate was connected with any of these services from January 1 of one year to January 1 of the succeeding year he is exempt from the tax, but in the event that during a portion of any year the licentiate was not so connected, he is liable for the tax. Proof of exemptions for tax or claims for refund will be sufficient if the licentiate forward to the board of medical examiners an affidavit containing a copy of his appointment and discharge, further substantiated by the statement of the exact date of service and termination thereof, with rank at date of discharge or the statement that he is still on active duty.

CONNECTICUT

Personal.—Leonard W. Bacon, Major, M. C., U. S. Army, New Haven, has recently been made chief of the orthopedic service of U. S. Army General Hospital No. 32, Chicago.

New County Society Officers.—Litchfield County Medical Association at its one hundred and fifty-fifth annual meeting held in Waterbury, April 23, elected Dr. Charles H. Turkington, Litchfield, president; Dr. Frederick William Wersebe, Washington, vice president, and reelected Dr. Harry B. Hanchett, Torrington, secretary-treasurer.——Windham County Medical Society at its twelfth annual meeting held in Hartford, April 18, elected Dr. Joseph A. Girouard, Willimantic, president; Dr. Arthur A. Chase, Plainfield, vice president, and Dr. Arthur D. Marsh, Hampton, secretary-treasurer.——Tolland County Medical Society at its annual meeting elected Dr. William L. Higgins, South Coventry, president; Dr. Alonzo L. Hurd, Somers, vice president, and Dr. Frederick W. Walsh, Rockville, secretary-treasurer.——Fairfield County Medical Society at its one hundred and twenty-seventh annual meeting held in South Norwalk, April 15, elected Dr. George R. R. Hertzberg, Stamford, president; Dr. Eli B. Ives, Bridgeport, vice president; Dr. Charles W. Gardner, Bridgeport, secretary, and Dr. Henry B. Lambert, treasurer.——Hartford County Medical Association at its annual meeting, held April 1, elected Dr. Thomas H. Weldon, South Manchester, president; Dr. Amos T. Harrington, Hartford, vice president, and Dr. Patrick F. McPartland, Hartford, secretary-treasurer.

DELAWARE

New Health Board Officers.—At the annual meeting of the Dover Board of Health, Dr. L. August H. Bishop was elected president, and Dr. Edwin S. Anderson, vice president.

Governor Approves Bill.—Governor Townsend has approved bills recently passed by the legislature requiring physicians practicing in hospitals as interns, to register with the secretary of the medical council, and relative to reporting and placarding diseases dangerous to public health.

DISTRICT OF COLUMBIA

Building for Medical Society.—Plans have been completed for a drive for two weeks to raise a fund of $100,000 to be used for the erection of a suitable home for the Medical Society of the District of Columbia. The site for this home has already been purchased on M Street, near Connecticut Avenue. The plans provide for a stone and brick structure, two stories and basement in height, to contain two auditoriums, office rooms, etc. Dr. William Gerry Morgan is president of the society and Dr. Edward Y. Davidson is chairman of the building committee.

FLORIDA

New State Officers.—At the forty-sixth annual meeting of the Florida Medical Association, held in Miami, May 20 to 22, under the presidency of Dr. Frederic J. Walter, Daytona, that city was selected as the place of meeting for 1920, and the following officers were elected: president, Dr. William E. Ross, Jacksonville; vice presidents, Drs. Henry C. Babcock, Miami, George A. Davis, De Land, and John A. Simmons, Arcadia.

Personal.—At the annual meeting of the St. Luke's Hospital Association, Jacksonville, April 15, Dr. Jay H. Durkee was elected president.——Herrman H. Harris, Major, M. C., U. S. Army, Jacksonville, who is in charge of a base hospital in Verdun, has been commissioned lieutenant-colonel in the medical corps.——Dr. Joseph Y. Porter, Jacksonville, has been elected honorary vice president of the Florida Anti-Tuberculosis Association.——Drs. Carroll H. Frink, Mirian Mullholland, Joseph Y. Porter, and George H. Gwynn, Tallahassee, have been elected directors of the Florida Anti-Tuberculosis Association, and Dr. Van H. Gwinne, Tallahassee, has been elected a member of the executive committee of the organization.

GEORGIA

Personal.—Dr. Charles H. Watt, Thomasville, has been appointed resident surgeon and Dr. Virgil P. W. Sydenstricker, Decatur, resident physician at the University Hospital, Augusta.——Frank K. Boland, Lieut.-Col., M. C., U. S. Army, Atlanta, who served in France with the Emory Hospital Unit, and later was on duty at Fort McPherson, Ga., has been discharged from the service.

License Revoked.—The supreme court of Georgia recently handed down its decision to the effect that the revocation of the license of William Hancock Lewis, Carrollton, was legal. Lewis contended that the law under which his license was revoked cannot constitutionally be applied in his case. A conviction in Haralson County on a charge of larceny after trust is said to be the ground on which the state medical board revoked his license.

ILLINOIS

Chiropractor Arrested.—Mr. R. D. McKown, a chiropractor of Atlanta, Ill., was arrested by the Department of Registration and Education of the State of Illinois for practicing his profession without a state license.

Tent Hospital for Tuberculous Children.—Because of hospital bed shortage in Chicago, tents for 1,000 tuberculous children have been erected at the Municipal Tuberculosis Sanitarium, Chicago, by order of the health commissioner.

Eye, Ear, Nose and Throat Men Elect Officers.—At the annual meeting of the Ilinois State Medical Society held in Peoria, the eye, ear, nose and throat section elected Dr. Frank Allport, Chicago, president, and Dr. Charles F. Burkhardt, Effingham, secretary.

Opening Lecture of Summer Session.—The opening lecture of the graduate summer quarter in medical sciences at the University of Illinois, College of Medicine, will be delivered by Michael F. Guyer, Ph.D., professor of zoology, University of Wisconsin, on "The transmission of eye-defects induced in rabbits by means of lens-sensitized fowl-serum," Monday, June 9, at 1 p. m.

Personal.—Dr. George F. Suker, Chicago, has returned from military service and resumed practice.——Herman H. Tuttle, Lieut.-Col., M. C., U. S. Army, Springfield, sanitary inspector of the Thirty-Third Division, returned with the division from France.——Lewis Wine Bremerman, Lieut.-Col., M. C., U. S. Army, Chicago, who recently returned from France, has been directed to present a report to the government urging the adoption of a plan of universal military training for the benefit of the young men of the country.——Charles H. Parkes, Capt., M. C., U. S. Army, Chicago, on duty overseas, has been promoted to Major, M. C.——Dr. Camillo Volini and Antonio Lagorio, Chicago, have been made chevalier knights of the Crown of Italy by King Victor Emanuel on account of their services given in war relief.——James A. Harvey, Lieut.-Col., M. C., U. S. Army, commanding officer of Base Hospital No. 84, returned from abroad with the Rainbow Division.

KANSAS

Personal.—Dr. Lydia Allen DeVilbiss, Topeka, director of child hygiene of the state board of health, has resigned to take postgraduate work and to lecture.——Dr. Jacob J. Entz, Hillsboro, has been elected president of the Kansas State Health Officers' Association.

New State Officers.—At the thirty-fifth annual meeting of the Kansas Medical Society held in Ottawa, May 7 and 8, it was announced by Dr. William S. Lindsay, Topeka, that 645 of the 1,400 members of the association have been officers in the service of the United States during the war, and resolutions were adopted endorsing the campaign being waged by the state board of health and especially that part which provides for the facilities for diagnosis and treatment of venereal disease, calling on all physicians of the state to cooperate with the health authorities in their efforts to combat venereal diseases, and urging local authorities to provide for the establishment of cooperation in the state board of health. The following officers were elected: president, Dr. Elmer E. Liggett, Oswego; treasurer, Dr. Lewis H. Munn, Topeka, and secretary, Dr. John F. Hassig, Kansas City.

MICHIGAN

New State Officers.—At the annual meeting of the Michigan State Medical Society, held in Bay City, May 21 and 22, the following officers were elected: president, Dr. Charles H. Baker, Bay City; vice presidents, Drs. Angus McLean, Detroit, Charles N. Sowers, Benton Harbor, Herbert E. Randall, Flint and Peter D. MacNaughton, Calumet. Kalamazoo was selected as the place of meeting for 1920.

MINNESOTA

Preventorium Planned.—The proposed Range Tuberculosis Preventorium will be built on the shores of Esquagama Lake, near Biwabik, where it is proposed to establish a fifty-five-bed hospital.

New Officers.—At the annual meeting of the Range Medical Society held in Virginia, May 14, Dr. Charles B. Lenont, Virginia, was elected president, Dr. Charles W. Bray, Biwabik, vice president, and Dr. William M. Empie, Virginia, was reelected secretary.

Southern Minnesota Association Meeting.—The headquarters of the Southern Minnesota Medical Association, which convenes at Rochester, June 23 and 24, will be at Armory Hall instead of at Hotel Zumbro. A complete list of operations will be published and available at the Armory Hall, at 8 o'clock each morning. The midsummer banquet will be held at the Armory Hall, June 23, at which the members and their ladies will be the guests of Drs. William J. and Charles H. Mayo. The address of the president of the association is "John Williams, Lake Crystal," and not "Rochester," as previously announced. Dr. Antoine Depage, La Panne, Belgium, will appear on the scientific program following the banquet, June 23.

NEW YORK

Small Fee Stimulates Reporting of Communicable Disease.—The township of Islip, L. I., has been successful in stimulating a more efficient reporting of communicable disease by observing the law authorizing the payment of 25 cents to physicians for each case that is reported. Islip, with a population of 20,000, paid twelve physicians $640 during 1918, or an average of $53 to each physician. The payment of this sum of money has also served to call public attention to the importance of the work of the health officer.

Health Department Empowered to Mark Drug Addicts.—Health Commissioner Dr. Royal S. Copeland has been advised by the corporation counsel, William P. Burr, that the board of health has power to make certain changes in the sanitary code relating to the control, identification and classification of drug addicts. After receiving this notification, Dr. Copeland stated that he would immediately go ahead with the health department's program. The form of identification cards to be used has already been determined on and a conference has been held with the police authorities concerning the method of registering and identifying addicts.

Personal.—Dr. Isaac W. Brewer, Geneva, formerly sanitary supervisor in the New York State Department of Health, has been appointed full-time health officer of Watertown, as a result of a competitive examination. The salary is $3,500.——Dr. Hermann M. Biggs, New York, state commissioner of health, has returned from the meeting of the International Red Cross Society in France.——Dr. Edward S. Godfrey, Albany, epidemiologist in the division of communicable diseases in the New York State Department of Health, who has been chief of the health inspection service of the American Red Cross in France, has returned.

Statewide Campaign Against Tuberculosis.—The New York State Department of Health and the Tuberculosis Committee of the Charities Aid Association have planned to cooperate in a statewide campaign against tuberculosis. Thirty-four counties will institute free clinics for the examination of those who have recently become affected with tuberculosis or who have been exposed. Members of the staffs of the tuberculosis sanatoriums will participate in the work. The reason for this vigorous campaign is that there has been an increase in tuberculosis since the influenza epidemic last autumn. Some localities have already established clinics. At Plattsburg such clinics will be held on the second and fourth Thursdays of each month for the present year.

New York City

Personal.—Professor Pedro Chutro of Buenos Aires, who served during the war at Buffon Hospital, Paris, is operating at the Polyclinic Hospital, having come to this country on the invitation of the United States government to demonstrate his method of bone grafting.——Dr. Marion M. Crawford will head the second unit of women physicians, dentists, nurses and motor drivers, now being organized for relief work in Serbia. The unit expects to sail before July 1.

Medical School Closes.—At a recent meeting of the Board of Trustees of Fordham University, it was decided to discontinue the medical department of Fordham University, owing to lack of funds necessary to maintain a first class medical school. The Fordham University School of Medcine has been in existence for fifteen years, and has always shown an annual deficit of considerable proportions. There has been no endowment fund of any kind for the medical school. An effort will be made to secure an endowment fund, and if it proves successful the school will be reopened. There are at present 297 students in the school, sixty-eight of whom will be graduated this month.

Further Opposition to Compulsory Health Insurance.—The Medical Society of the County of New York, at its stated meeting, May 26, passed resolutions approving of the instructions against compulsory health insurance given by the House of Delegates of the Medical Society of the State of New York to its delegates to the House of Delegates of the American Medical Association, and confirmed these instructions to such of the members of the House of Delegates of the American Medical Association as are members of the Medical Society of the County of New York. Vigorous opposition to compulsory health insurance was voiced by most of the speakers at a meeting of the social insurance department of the National Civic Federation, May 24. Among the arguments urged against compulsory health insurance were that it had proved a failure in Germany and Great Britain; that it had greatly increased malingering, and that it had not produced any decrease in the death rate.

NORTH CAROLINA

Personal.—Dr. David A. Stanton has been elected mayor of High Point.——Dr. Andrew J. Warren, Salisbury, has been designated as assistant secretary of the state board of health.——Mr. H. E. Miller has been appointed chief of the sanitary engineering in the state board of health, succeeding Mr. W. H. Booker.——Dr. Charles W. Armstrong, Troy, has been appointed whole-time health officer for Rowan County.——Dr. G. A. Roberts, V. S., Raleigh, for twelve years head of the department of veterinary medicine in the state college, has resigned to become veterinarian in the hygienic laboratory of the medical school at São Paulo, Brazil.——Dr. Buxton B. Williams has been reelected superintendent of public health of Greensboro.

OHIO

State Medical Association Meeting.—At the seventy-third annual meeting of the Ohio State Medical Association, held in Columbus, May 6 to 8, the following officers were elected: president, Dr. James F. Baldwin, Columbus; president-elect, Dr. Charles Lukens, Toledo; secretary, Dr. Herbert M. Platter, Columbus (reelected). Toledo was selected as the next place of meeting.

Personal.—John D. O'Brien, Lieut.-Col., M. C., U. S. Army, Canton, arrived in America, May 23, after twelve months' service in France, and will resume practice in Canton.——Dr. Ward I. Huber, Cleveland, was attacked by holdup men, May 16, and received several stab wounds of the head, neck and shoulders.——Dr. John M. Anderson, Greenville, has been appointed division surgeon of the Pennsylvania System between Columbus and Indianapolis.

Cincinnati

Personal.—Dr. Carey P. McCord, formerly in charge of camp sanitation and disease prevention at Camp Sherman, Chillicothe, has accepted the position of director of the newly created department of industrial medicine and public health connected with the University of Cincinnati.

OKLAHOMA

Personal.—Dr. Lewis E. Emanuel, Chickasha, health officer of Grady County, who is at present on duty in France, has been appointed a member of the state board of medical examiners.——Dr. Allen G. T. Childers, Mulhall, has been appointed health officer of Logan County to succeed Dr. Clarence S. Petty, Guthrie.

War Officers' Organization.—A state organization of medical men who took part in the World War was formed, May 20, at the annual meeting of the Oklahoma State Medical Association, with an initial membership of 125. Dr. Leonard S. Willour, McAlester, was elected president; Dr. Samuel J. Fryer, Muskogee, secretary, and Dr. Rex G. Bolend, Oklahoma City, treasurer.

Hospital Association Formed.—At a luncheon given at Muskogee, May 21, the Oklahoma State Hospital Association was organized. The association will work in conjunction with the state medical association and will hold its meetings at the same time and place. The object of the organization is the standardization of hospial service. The following officers were elected: president, Dr. Fred S. Clinton, Tulsa; vice presidents, Drs. John A. Hatchett, El Reno, and Arthur S. Risser, Blackwell; secretary, Paul R. Fesler, Oklahoma City, and treasurer, Dr. Sessler Hoss, Muskogee.

PENNSYLVANIA

Protective Association Organized.—At the meeting of the Physicians' Protective Association held in Buckingham, May 9, Dr. Fred C. Emery, Fox Chase, was elected president; Dr. Alfred E. Fretz, Sellersville, vice president; Dr. Elwood T. Quinn, Jenkintown, secretary, and Dr. Levi S. Walton, Jenkintown, treasurer.

Philadelphia

Belgian Surgeons at College of Physicians.—Prof. Antoine Depage and Capt. Van De Velde, surgeons to the Ambulance de l'Océan at La Panne, Belgium, addressed a special meeting of the College of Physicians, June 6, on 'Contributions to the Progress in Surgery during the War."

Personal.—Cheney M. Stimson, Major, M. C., U. S. Army, who served with Base Hospital No. 82 at Toul, France, arrived at Newport News, May 24.——Charles A. E. Codman, Major, M. C., U. S. Army, who has been placed in charge of Base Hospital No. 104, the Beau Desert Hospital centered near Bordeaux, has been promoted to the rank of lieutenant colonel, Medical Corps.——Dr. Daniel J. McCarthy, lieut-col., M. C., U. S. Army, recently discharged, has been appointed chief medical director of St. Agnes Hospital.——Dr. John A. White has been appointed resident physician in the bureau of charities, and J. M. Fruchter, outdoor physician.

TEXAS

Personal.—Leslie C. Frank, Sanitary Engineer, U. S. P. H. S., has been appointed director of public health of Dallas. ——Mrs. Frances E. Sullivan, Smithsville, has been appointed a bureau director in the state health department.

Health Officers Organize.—May 14, a conference of health officers of the state was held in Waco, over which Dr. Charles W. Goddard, Holland, state health officer, presided, and an association was organized to be known as the Texas Health Officers' Association, with Dr. Goddard as president, and Dr. Oscar Davis, Anderson, as secretary.

TENNESSEE

New Laboratory Building.—The board of trustees of the University of Tennessee voted $100,000 to the medical school to be used for a new laboratory building to be erected in the rear of the Memphis City Hospital. The new building will have laboratories for pathology, bacteriology, chemistry and physiology.

New Dean at Memphis.—Dr. Leverett D. Bristol, a few days ago was elected dean and professor of bacteriology and public health of the University of Tennessee College of Medicine, Memphis. Dr. Bristol is a graduate in science from Wesleyan University, Connecticut, and a graduate in medicine from Johns Hopkins University. His previous teaching experience has been at Syracuse University College of Medicine, Syracuse, New York; University of Minnesota, Minneapolis, and the University of North Dakota.

WISCONSIN

County Dispensary Opened.—A free medical dispensary is to be opened by Milwaukee County in the Sachs Building, Milwaukee, and the county board has appropriated $30,000 for the maintenance of the institution.

Child Welfare Stations Opened.—The deputy commissioner of health of Milwaukee announces the opening of eight new child welfare stations making a total of fourteen in the city. To these stations parents are urged to bring their children, under school age, for medical treatment.

New County Hospital Plans.—The new Milwaukee County Hospital which is to be erected at Twenty-Fourth and Grand Avenue, Milwaukee, will cost about $1,000,000, and will have accommodations for 500 patients. Plans are being so prepared as to permit the construction of such additional units as may be required.

Personal.—Dr. Carroll D. Partridge, laboratory director of the Milwaukee Health Department, has been appointed full-time health officer of Wausau.——Dr. Fred B. Welch has been appointed health officer of Janesville to succeed Dr. Samuel B. Buckmaster, who had served in that position for fifteen years.——Dr. William E. White has been elected president of the Burlington Public Health Association.——Dr. John L. Callahan has been elected president of the La Crosse Board of Health.

Health Bills.—Among the bills either fully enacted or having passed both houses of legislature are the following: making influenza a reportable disease; authorizing local health boards to order closed schools, churches, theaters and public assemblages for the control of epidemics; legalizing delayed vital records; classing chancroid as a venereal disease; requiring every municipality to establish one or more public comfort stations; creating a department of occupational therapy at county tuberculosis sanatoriums; authorizing counties having county sanatoriums to provide outpatient departments to encourage follow-up activities; prohibiting use of vehicles for purposes of prostitution (a measure for venereal disease control).

CANADA

Dominion Department of Health.—The bill for the creation of a Dominion of Canada Department of Health has been put through the committee stage of the senate without undergoing any substantial amendments.

New "Patent Medicine" Law.—Canada is enacting a new "patent medicine" law which will provide that every "patent" or proprietary medicine must be known by a number and that the manufacturers must obtain an annual license. There will also be appointed in connection with this law an advisory board. Dr. Manion, M.P., advised that the word "cure" should be debarred from all "patent medicine" advertisements.

Inspection of Schoolchildren in Ontario.—There is to be a general inspection of schoolchildren of the Province of Ontario under the direction of the minister of education. Doctors and nurses to carry on this work have been appointed, which, it is believed, will not be completed before the expiration of one year or possibly even two years. A dental inspection will be made at the same time. The inspection will be to a large extent a rural and small town survey. Most of the cities and larger towns have had medical and dental inspections of varying thoroughness.

Ontario Medical Association.—At the annual meeting of the Ontario Medical Association in Toronto, May 28, 29 and 30, Sir St. Clair Thompson, London, England, in addition to reading a paper on "Shakespeare in Medicine," spoke at the annual banquet on postgraduate work in England referring to the establishment of a fellowship in medicine, which would enable medical men in Canada to take advantage of those courses in special work. Dr. Frederick W. Marlow, Toronto, was elected president; Dr. James H. Mullin, Hamilton, vice president, and Dr. Thomas C. Routley, Toronto, secretary.

Inquiries of Ministry.—In reply to inquiries made by Dr. C. A. Gauvreau from Tamiscouata, Que., the government states that it is not its intention during the present session to pass a measure respecting "patent medicines," repealing the act now enforced, that the intention of the government is efficaciously to inspect the preparation and sale of "patent medicines" which contain basic properties of copious doses of alcohol and ingredients to produce abortion, and that it is proposed by the government to establish a board qualified to pronounce *finally* on the character of "patent medicines" as regards the content of alcohol and their toxicity.

Canadian Public Health Association.—At the annual convention of the Canadian Public Health Association with the health officers of Ontario, held in Toronto, May 26 and 27, the following officers were elected: president, Dr. Henry E. Young, Victoria, B. C.; vice presidents, Dr. John A. Amyot, Toronto, Dr. William F. Roberts, St. John, N. B., and secretary, Dr. Robert D. Defries, Toronto. The meeting in 1920 will be held in Edmonton, Alta. The most important item of business was the passing of a resolution favoring the manufacture of arsphenamin by the provincial boards of health, and urging the federal government either to make the products themselves or to allow other companies to manufacture them in Canada.

Control of Venereal Disease.—Another conference of representatives of the different health boards in Canada was held in Ottawa, May 30, at the call of the Dominion government. Major-Gen. John T. Fotheringham presided. A Canadian National Council for combating venereal diseases was formed, and Mr. Justice Riddell, Toronto, was named as permanent chairman. All provincial governments will be asked to cooperate with this council for the suppression of social vices in Canada; and its activities will arrange themselves under four heads: education, recreation, medical treatment and law enforcement. Major Jason S. Joy, head of the Commission on Training Camp Activities of the United States, was present and gave valuable advice as to Canadian propaganda and work. It is proposed to establish clinics throughout Canada where cheap or free arsenical products may be procured.

LATIN AMERICA

Deaths in the Profession.—Dr. Francisco Zayas y Jiménez, dean of the medical profession in Cuba, successful in scientific agriculture and known also for his poetry.——Dr. H. D'Achardi, one of the most promising young physicians of Bogotá, Colombia.

Personal.—The *Repertorio de Medicina y Cirugía* of Bogotá states that Dr. J. Vargas Suárez has been appointed by the government *adjunto ad honorem* at the Legation of Colombia at Washington. During his absence the chair of internal pathology of which he is the incumbent will be temporarily filled by Dr. Juan N. Corpas.

GENERAL

Eye and Ear Men to Meet.—The Pacific Coast Oto-Ophthalmological Society will hold its annual meeting at St. Francis Hotel, San Francisco, August 4 to 6. The secretary of the association is Dr. Aaron S. Green, Shreve Building, San Francisco.

Hospitals for Near East.—The American Women's Hospitals is sending a fully equipped hospital unit to Serbia and another to Palestine. Each of these units will have a mobile hospital with fifty beds, sixteen motor ambulances, with drivers, in addition to the requisite number of doctors and nurses.

New Chairman of Health and Quarantine Committee.—Senator Joseph I. France, Baltimore, is to be the new chairman of the senate committee on public health and quarantine, succeeding Senator Joseph E. Ransdell of Louisiana. Senator France is a graduate of the Baltimore College of Physicians and Surgeons and was secretary of the Medical and Chirurgical Faculty of Maryland in 1916.

Southeastern Sanitarians Meet.—At the annual meeting of the Southeastern Sanitary Association held in Rome, the second week in May, Dr. Edgar A. Hines, Seneca, S. C., was elected president, and vice presidents from the various states were elected as follows: South Carolina, Dr. Baxter M. Haynes, Spartanburg; North Carolina, Dr. C. Curtis Hudson, Charlotte; Tennessee, Dr. M. Jacob, Nashville; Alabama, Dr. Samuel W. Welch, Montgomery, and Georgia, Dr. Homer L. Barker, Carrollton.

The "American Child."—A new magazine, called the *American Child*, appeared for the first time last month. It is intended to deal with child welfare problems, and will be published quarterly by the national Child Labor Committee, as successor to the *Child Labor Bulletin*. The editors of the *American Child* propose to publish the investigations and opinions of experts on child welfare. Owen R. Lovejoy is editor of the periodical; Raymond G. Fuller, managing editor; E. N. Clopper and Ruth McIntire, associate editors, and Wiley H. Swift and Josephine J. Eschenbrenner, contributing editors.

Bequests and Donations.—The following bequests and donations have recently been announced:

Presbyterian Hospital, Philadelphia, a contingent bequest of $2,500 on the death of her sister, by the will of Mathilda J. Jones.

Trudeau Sanitarium, Saranac, N. Y., $50,000; Hebrew Orphan Asylum, $15,000, and the residue of his estate of $200,000 to establish the Kerbs Hospital for Tubercular Diseases, provided a daughter dies without issue, by the will of Edward A. Kerbs.

Jewish Seaside Home, Atlantic City, $500, by the will of Rose Lowenstein.

LaHarpe, Ill., for the construction of a public hospital, the estate of Mary F. Davier, appraised at $30,000.

Johns Hopkins Hospital, Baltimore, about $250,000 by the will of John W. Grace, dependent on the expiration of annuities. *This fund* is to be used in extending the benefits of the pay wards of the institution to persons of moderate means.

Medical Legislation.—Considerable legislation of interest to the medical profession will be introduced at the special session of Congress, which is now fairly well under way. It is understood that several measures to strengthen the Food and Drugs Act will be introduced shortly and these doubtless will throw further restrictions around the manufacture and sale of drugs. Considerable legislation of a medical nature which is the outgrowth of the war and war problems is to be discussed. The first measure of this kind was introduced by Congressman Norman J. Gould on the opening day of the session. It provides that any soldier, sailor or marine, who has been or may be honorably discharged suffering from wounds, injuries or illness incurred in the line of duty shall be entitled to receive surgical or medical treatment from the medical officers of the Army, Navy or Public Health Service free of charge whenever practicable. Medical officers refusing to grant such aid are to be dismissed from the service at the discretion of the President.

Social Hygiene Board Appropriations.—The United States Interdepartmental Social Hygiene Board, through its executive secretary, Dr. T. A. Storey, Washington, D. C., announces the following recent appropriations from the Scientific Research Fund of the board:

Johns Hopkins Medical School (under the direction of Hugh H. Young, M.D., professor of urology, and John T. Geraghty, M.D., associate professor of urology, to Johns Hopkins Hospital): (1) Development of new synthetic drugs for the treatment of gonorrhea. Under the direction of E. C. White, Ph.D., experimental chemist. (2) Manufacture and investigation of a series of new organic compounds in the treatment of syphilis. Under the direction of David M. Davis, M.D. (3) Manufacture and investigation of a series of penetrating organic dyes in the treatment of chancroids. Under the direction of Ernest O. Swartz, M.D., Cincinnati. (4) Experimental study of various methods of early treatment of venereal infection with the object of developing simpler technic, more efficient and less expensive drugs. Under the direction of William Jack, M.D.

University of Wisconsin Medical School (under the direction of Arthur S. Loevenhart, M.D., professor of pharmacology): An attempt to prepare mercurial and arsenical compounds which have a predilection for the central nervous system, in the hope of finding drugs more useful than any known in the treatment of syphilis of the central nervous system.

League of Red Cross Societies.—The League of Red Cross Societies, the purpose of which is to associate the Red Cross societies of the world in a systematic effort to anticipate, diminish and relieve misery produced by disease and calamity, was formed at Paris, May 7, 1919. The founder members of the league are the Red Cross societies of the United States, Great Britain, France, Italy and Japan, which will invite other Red Cross societies into membership. While the league will establish relations with the various governments, it is purely a voluntary organization, nonpolitical, nongovernmental and nonsectarian. The objects of the league as formally set forth in the articles of association are:

1. To encourage and promote in every country in the world a duly authorized, voluntary National Red Cross organization, having as purposes improvement of health, prevention of disease, and mitigation of suffering throughout the world, and to secure the cooperation of such organizations for these purposes.

2. To promote the welfare of mankind by furnishing a medium for bringing within reach of all peoples the benefits to be derived from present known facts and new contributions to science and medical knowledge and their application.

3. To furnish a medium for coordinating relief work, in case of great national or international disaster.

The control of the league will be by a general council composed of representatives of all members of the Red Cross societies meeting at designated periods. In the intervals between meetings control will be exercised by a governing board of fifteen members elected by the general council and two ex-officio members. The board of governors, which held its first meeting, May 7, consists of Henry P. Davison of the American Red Cross, Sir Arthur Stanley of the British Red Cross, Comte Kergorlay of the French Red Cross, Count Frascara of the Italian Red Cross, and Professor Ninigawa of the Japanese Red Cross. Mr. Davison was elected chairman of the governing board. Geneva is the headquarters of the league.

FOREIGN

The Victory Meeting.—Some of our exchanges in other countries mention the Victory Meeting with appreciation and congratulations, and reproduce the notice sent out by the Association asking the Allied governments to send delegates, *en vue d'établir les liens d'une amitié durable entre médecins.*

Physicians in the German Peace Delegation at Paris.—The *Paris Médical* states that the German delegation includes twenty physicians: Drs. Landberg, minister of the empire; Carl Melchior; Max Cahen; Schroeder, undersecretary of state; Richter; von Becker; Schall; Hans Meyer; Bosch; Mühling; Kaufmann; Goldmann; Hirth; Lothringer; Manteler; Hirsch; Herschmann, and Professors Schücking and Bier.

Pasteur Institute at Athens.—The *Grèce Médicale* states that an Athens philanthropist has donated the funds necessary to organize a service for treatment of rabies at Athens, and Dr. Sergent, director of the Pasteur Institute in Algeria, has gone to Athens to advise in its construction. In the meanwhile the service will be installed in a rented building, and Sergent has the work well under way.

Meeting of the Internists of the Northland.—The *Hygiea* states that the Ninth Nordisk Congress on Internal Medicine is to convene at Copenhagen August 18-20, 1919. The subject appointed for discussion is the influence of the diet in the treatment of insufficiency of the heart and kidneys. Professor K. Faber will preside, and the main addresses are to be made by Dr. Rubon of Copenhagen and Dr. K. Motsfeldt of Christiania. Dr. V. Scheel is secretary, address Bispebjærgs hospital, Copenhagen.

University Interchanges.—A committee was formed this year at Lisbon to promote interchange of professors between Portugal and other countries, and the *Medicina Contemporanea* reports that a series of six successful lectures has recently been delivered at Lisbon by Prof. F. Lagrange of the chair of ophthalmology at the University of Bordeaux. He spoke in particular on the progress realized in ophthalmology during the war and on the relations between general disease and disease of the eyes, and described his implant method for preparing the socket for an artificial eye. Professor Lagrange also delivered a similar series of lectures at Madrid.

Meeting of the Surgeons of the Northland.—The Twelfth Nordisk Surgical Congress meets at Christiania, July 3-5, 1919. The topics appointed for discussion are "Gastric and Duodenal Ulcer"; "Premature Separation of Normally Located Placenta," and "Cancer of the Rectum." Prof. K. Brandt will preside, and Dr. J. Borelius is the general secretary. The leading addresses are to be distributed already printed, and only a fifteen minute summary will be delivered. Among other communications announced is one by Prof. R. Bárány on primary suture of wounds of the brain, and one by Tengwall on the findings with functional kidney tests as indications for prostatectomy.

Scandinavian Physicians Organize.—The war has brought the three great Scandinavian countries much closer together as they realized the advantages of cooperative action in various fields, economic, scientific, etc., and the benefit from pooling production to render these three great neutral countries independent of other countries. To promote a still closer union an organization has been formed, the "Norden," with nominal dues and a board of managers to consist of 100 members. Among the delegates from Denmark on the board are four physicians, Drs. K. Faber, Heerfordt, E. Hein and V. Scheel. The latter is editor of the *Ugeskrift for Læger.* In fact, physicians have been mainly the pioneers in the movement.

The Achúcarro Prize in Histology.—To honor the memory of this eminent Spanish histologist, whose untimely death was chronicled last year, his family has founded a prize of 1,000 pesetas to be awarded biannually for the best work that has been published in the four preceding years on normal or pathologic histology. The prize will be awarded alternately in Spain and abroad. In Spain it can be given for the best work on general biology or the total works of an author, as well as for work in histology. Abroad, the field is limited to histology of the nervous system. The board of awards consists of Profs. Ramon y Cajal and L. Simarro, with the laymen, the marqués de Palomares and Severino Achúcarro. The prize is to be awarded this year to a Spanish writer.

Graduate Course on Tuberculosis at *Madrid*.—The Tuberculosis Preventorium and Dispensary at Madrid has opened what is called the Escuela de Tisiología, for training in the prevention and treatment of tuberculosis. There are to be two courses, each of three months, and the instruction is to be practical to the utmost. By March 28, thirty-eight physicians of Madrid and the provinces had enrolled for the course. Dr. T. Latour has charge of the subject of seashore sanatoriums; Dr. Calatayud, of electricity; Dr. Mayoral, of laboratory procedures; Dr. Bastos, of bone and joint tuberculosis, and Dr. López Durán, of clinical examinations. The *Revista de Medicina y Cirugía Prácticas* states that the new school does not receive any support from the public authorities.

Deaths in the Profession Abroad.—Dr. J. P. Carles, *agrégé libre* of pharmacy and chemistry at the University of Bordeaux until his retirement in 1904, president of the Société de Pharmacie, lauréat of the Académie des sciences, and of the Academie de médecine, aged 74. He did pioneer work in various lines of the chemistry of drugs and foods and published numerous articles. He was on the editorial staff of the *Journal de médecine de Bordeaux*, and his son carries on his traditions with this journal and also in the medical faculty, as *agrégé de médecine*. —— Dr. Gino Menabuoni, an Italian pediatrist, aged 38, whose writings are well known. For the last three years he has had charge of the pediatric clinic of the University of Siena, and was on the editorial staff of the *Rivista di Clinica Pediatrica* of Florence.

Report of South African Influenza Commission.—The commission appointed by the governor-general of the Union of South Africa to study the influenza epidemic, recently made its report in which the various phases of this problem were discussed. The commission found no evidence that influenza is an air-borne disease and saw no reason to question the validity of the theory that influenza is spread by contact. The general trend of the evidence submitted was that the spread of the disease was facilitated and accelerated by the railways. The commission was also of the opinion that there is some reasonable doubt as to whether the influenza bacillus or any of the other organisms so far found associated with the disease are the true causative agents of the disease. There is no specific cure for the disease. Very detailed recommendations were made on how to handle future outbreaks of influenza.

Change of Name of the "Nordiskt Medicinskt Arkiv."—The editorial staff of these important archives of the Northland announce that henceforth it is to be known as the *Acta chirurgica scandinavica* and the *Acta medica scandinavica*, instead of its present title as the medical and surgical sections of the *Nordiskt medicinskt Arkiv*. It aims for a wider international scope in its publications and readers, the communications to be published in any of the principal languages the writer prefers. This high class journal was founded by Axel Key in 1869, and thus has now reached its semicentennial. It has been indexed regularly for many years in our Foreign Current Literature Department, but was among those shut off by the war. The *Acta otolaryngologica* and the *Acta mathematica* have already appeared, and maintain the high standard of these other Scandinavian Archives which they continue under another name.

CORRECTION

"Report of Throat Cultures in Measles."—In an article by Dr. R. H. Knowlton, The Journal, May 24, the heading as given makes it appear that the work was done in Takoma Park, D. C. The author writes that the data were collected at the Base Hospital, Columbia, S. C.

MEXICO LETTER

City of Mexico, May 25, 1919.

The National Medical Association

On the initiative of a group of leading physicians, a number of meetings have been held to deliberate the question of the advisability of founding in this country a National Mexican Medical Association like those that exist in other countries, to promote the moral and economic welfare of the profession and raise the standards of medical education, etc. It was decided to call a general meeting which is to be held in one of the assembly rooms of the Y. M. C. A. building. Dr. G. Mendizábal, well known as a speaker and as a cultured and honorable member of the profession will address the meeting, explaining the objects of the proposed association. Dr. D. Vélez, ophthalmologist, and Dr. Godoy Alvarez, gynecologist, have been particularly prominent by the enthusiasm they have displayed in regard to the project, which, it is hoped, will culminate in a fine reality.

University Notes

Lic. Macias, rector of the university here, has been invited to take part in the ceremonies at the University of Arizona in the coming July, and it is expected that he will accept the invitation.——Reciprocally, Mr. R. B. von Klein Smid, who is president of the University of Arizona, has been invited through the Mexican Embassy at Washington to come to this country, and a committee appointed by the University is to proceed to the frontier to welcome him and escort him to the capital.——Prof. D. C. Reiche has been appointed to the chair of biology in the Escuela de Altos Estudios.——The resignation of Dr. Terrés was not accepted, and he will continue at his post as professor of clinical medicine where he has been so successful.——Dr. Jesús Arroyo, professor of histology in the medical faculty, has been elected a member of the Academia de Medicina, his address on the colloidal gold reaction having won him this distinction.

Medical Publications

The rather short list of medical journals in Mexico has just been enriched with two new ones, the *Revista del Hospital Militar de Orizaba* which has just started publication in the town of this name in the state of Veracruz. It is to be devoted mainly to topics of military medicine. Col. Dr. Cándido Nieto is the director. The other new journal is the *Archivos Médicos del Norte*, which is being issued in the city of Torreón in the cotton district of the state of Coahuila. The director is Dr. F. de Rosenzweig, a surgeon well known here and in the northern part of the country.

Cordial Reception to Red Cross Medical Delegate

Dr. R. R. Vértiz, delegate from the Mexican Red Cross to the international conference at Berne, writes from New York of the cordial welcome he received from the personnel of the North American Red Cross, both at the city of Washington and in New York. He had to go to Washington to have his passports made out. This Mexican physician was delighted with the "cortesia exquisita" shown him in the neighbor country, and the letter in which he expressed these sentiments was given to the press for publication.

Death of a Mexican Delegate

A cablegram from Montevideo has just announced the sudden death of D. Amada Nervo, perhaps the leading Latin-American poet of our day, minister from Mexico to Argentina and Uruguay, and delegate from Mexico to the Child-Welfare Congress, the Congreso del Niño.

PARIS LETTER

Paris, May 15, 1919.

The Red Cross of America and of the Allies

The American Red Cross proposes to reorganize its activities so that its essential purpose will be to afford relief, especially to the repatriated inhabitants of the devastated regions of France and Belgium. The Red Cross Societies of the Allies have formed a league, and President Wilson has addressed a letter to Mr. Henry Davison, president of the league, extending congratulations on his having successfully united all the Red Cross societies in a common effort to relieve misery, the result of disease and great calamities.

A Memorial to Professor Landouzy

A committee has been formed consisting of colleagues, students and friends of Professor Landouzy to secure funds by subscription with which to establish a Landouzy Museum at the Faculté de médecine de Paris and to strike off a medal to be given to subscribers. Subscriptions may be sent to the treasurer of the committee, M. P. Masson, 120, boulevard Saint-Germain, Paris.

Bestowal of the Fourragère on American Sanitary Companies

American Sanitary Companies 539 and 625 have been decorated with the fourragère combined with the colors of the croix de guerre.

Brazilian Physicians made Members of Legion of Honor

Colonel Nabuco de Gouvea, chief of the Brazilian military mission in France, has been made a commander of the Legion of Honor. Dr. Mourier, undersecretary of state for the Army Medical Corps, praised the Brazilian mission for the work done by its medical corps during the war and for the services rendered by the Brazilian hospital at Vaugirard, which was organized by Colonel Nabuco de Gouvea. Drs. Borges da Costa, Parreiras, Horta and Montenegro, chiefs of service in this hospital, have been awarded the cross of a chevalier of the Legion of Honor.

Use of Refrigerated Meats

At a recent session of the Académie de médecine, M. Martel, director of the veterinary and sanitary services of Paris and of the department of the Seine, stated that the use of refrigerated meat has increased considerably in France.

For several months past Paris and the contiguous territory alone have used from 200 to 250 tons per day.

The chemical changes which take place under the influence of prolonged cold are comparable to those sustained by the so-called *rassic* which the large cities have been using for some time, except that the action of the bacteria on the surface is considerably reduced.

Death of Eminent Chemist

Dr. J. P. Carles, associate professor on the Bordeaux medical faculty and corresponding member of the Academy of Medicine since 1902, is dead.

Personal

At a meeting held May 13, the Academy of Medicine elected four national correspondents: Dr. Paul Courmont, professor of experimental and comparative medicine on the Lyons medical faculty; Dr. Lemoine, medical inspector of the army; Dr. Pachon, professor of physiology on the Bordeaux medical faculty, and Dr. Remlinger, director of the Tangiers Pasteur Institute.

At its last meeting the council of the Paris medical faculty elected four professors: Dr. Ménétrier, associate professor and hospital physician, was made professor of the history of medicine. Dr. J. L. Faure, associate professor and hospital surgeon, was made professor of clinical gynecology. Dr. Duval, associate professor and hospital surgeon, was made professor of clinical surgery. Dr. Gosset, associate professor and hospital surgeon, was made professor of operative medicine (médecine opératoire).

LONDON LETTER

London, May 14, 1919.

"Patent Medicine" Advertisements

In the discussion on the second reading of the ministry of health, Lord Buckmaster said that the only objection to the bill was that it did not go far enough. He would like to have seen some better provision made to enable knowledge of the laws of health to be extended. One of the most important duties to be undertaken in connection with this bill was the control of advertisements relating to "patent medicines" and patent foods. Unless control were effected through this ministry of health, it would never be effected at all. The reason is this: The value of the advertisements of these patented articles is so vast that there is no journal which dares expose the mischievous character of these preparations for fear of finding a loss instead of a profit indicated by its balance sheets. Some of these "patent medicines" are deliberately deleterious, and, in many cases, cause damage to children's health. If the ministry lacks authority to deal with the evil, the needed power should be given it. In the government reply to the discussion, nothing was said on this important topic.

The Ravages of Ankylostomiasis in Queensland

Dr. Lambert, who is investigating ankylostomiasis in Queensland for the Rockefeller Foundation, declares that 23 per cent. of the population of the coast are infected. He says that if the ravages are not combated, a degenerate race will result in a few generations. This statement evoked a sharp contradiction in the columns of the *Times* from the high commissioner for Australia, and from the agent general for Queensland. It was, however, borne out by the eminent helminthologist, Dr. R. T. Leiper of the London School of Tropical Medicine. He quoted the first progress report of the Queensland hookworm campaign conducted by the department of public health under the advice of, and in close affiliation with, the Australian Institute of Tropical Medicine, which was published in 1918. The region surveyed extended over 2,000 square miles, embracing 280 miles of coastal country, from Cooktown to Townsville, with a population of 14,137. The canvass was so carefully conducted that of this total no fewer than 11,678 persons voluntarily submitted to examination for hookworm. Of these, 2,623 were found to be infected. Dr. Leiper also quoted the report of the Queensland Department of Public Instruction on the effects of hookworm infection on the mental development of North Queensland schoolchildren, which was published in January last. The report says: "The direct outcome of the results of such a blighting disease, which is preying on 40 per cent. of the total school population from Cooktown to Townsville, and which is stamping serious mental, physical and sexual degeneracy on 25 per cent. of the total school population, can be nothing other than the weakening of the social fabric and the unfitting of the coming generation for the struggle for existence. Indeed, the tendency of the disease, if not controlled, is toward the obliteration of the race through the unsexing of its victims and the reducing of individual resistance toward acute infections such as pneumonia and tuberculosis."

The Medical Parliamentary Committee

The formation of the Medical Parliamentary Committee was described in a previous letter to The Journal. Its objects are to increase medical representation in Parliament, to supply information of the trend of expert opinion on health questions, and to supply early information on impending legislation to the various medical organizations which are represented on the committee. These comprise most of the medical organizations, such as the Society of Health Officers, the Medical Women's Federation, the State Service Association, the British Dental Association, the National Medical Union and the Medico-Political Union. After some hesitation the British Medical Association, which has always held that its political activities cover every field and that, therefore, other medicopolitical bodies are superfluous and even detrimental by dividing the profession, has so far recognized the Medical Parliamentary Committee as to send representatives to a conference which has been held under the presidency of Sir Watson Cheyne, M.P. In proposing the first resolution, Dr. A. Latham emphasized the point that the Medical Parliamentary Committee was a temporary body appointed only for the purpose of devising some scheme whereby the opinions of the profession can be focused, and by means of which, through increasing parliamentary representation or through agitation they may be conveyed to the public. He said that in the near future health questions are bound to loom large in all legislation. He declared that the medical profession consists of men engaged in a number of different types of work—factory, colliery or other industrial forms of practice, general practice among the poor and well-to-do, medical officers of health, school physicians, navy, army and air force physicians, specialists, consultants, and men engaged in research; and stated that health questions in time of peace are as complex as any that arise in the management of an army. Any medicopolitical question, he said, would be looked at by different sections of the profession from different angles, and some organization was necessary whereby representatives of each of these sections might be brought together.

At present there is no organization of the profession representing the whole body, he pointed out. Nearly all existing bodies, moreover, have had too much work arising out of their special aims to permit them to give much time to political developments, while nearly every one has been suspected of furthering the interests of the profession at the expense of the public good. This is fatal to medical progress. If the new body is to be successful it must obtain increased political influence, and for that must secure the confidence and sympathy of the public, he said. It must be recognized as looking after the community rather than after the physician; and this is proper, for the interests of the physician will be cared for if the interests of the community are met. The medical profession has made a mistake in the past in not leading the public to understand that the interests of physicians are wrapped up in the interests of the community. Unfair conditions of service will produce a discontented profession and bad work.

Sir Thomas Verrall addressed the meeting as representative of the British Medical Association. He said that he could not avoid pointing out that the association did all the things claimed by the Medical Parliamentary Committee. If it were left to the association to establish a permanent parliamentary committee, as he thought would be wise, the association would probably agree that there should be a permanent parliamentary committee of some kind. It would be necessary to present to all members of Parliament a right view of health questions. The custom of the association had been to communicate not only with medical members of Parliament but also with all heads of departments. He would not oppose the formation of a permanent medical parliamentary committee, but he hoped that for the present the question of its construction would be left open. A resolution was then carried that the committee consist of: (*a*) a representative or representatives of any society or association of registered dental or medical practitioners having as its objective, or taking an interest in, medicopolitical activity; (*b*) two representatives appointed by the nursing profession; (*c*) a representative of midwives; (*d*) a representative appointed by the Pharmaceutical Society; (*e*) a representative appointed by the British Hospitals Association; (*f*) the editor of: (1) the *British Medical Journal*, (2) the *Lancet*, (3) the *Medical Press*, (4) the *Medical World* and (5) the *Medical Times;* (*g*) all medical members of Parliament, and (*h*) members, not exceeding 20 per cent. of the elected representatives of the whole medical profession, to be elected as soon as the committee's financial position warrants the necessary expenditure.

An Atlas for the Blind

One of the latest productions of the National Institute for the Blind is a geographic and industrial atlas of the British Isles. The book is the outcome of years of experimenting and improvement on old maps for blind people; for the providing of a map that can be studied by means of the finger-tips has proved immensely difficult. Largely owing to the efforts of Mr. H. M. Taylor, F. R. S., of Cambridge, himself sightless, the work is a great advance over anything achieved before. It is very complete, and follows to the smallest detail the ordinary printed atlas. Towns, rivers, boundaries, coast-lines, mountain ranges, and railways are all distinctly marked. Each one of these has a number marked against it which corresponds with a key on the page opposite the map. The volume is a large one, containing 222 pages, twenty-one of which are maps, and is bound in cloth boards. The price is only half a dollar.

Marriages

Charles Wallis, Lieut., M. C., U. S. Army, Arkadelphia, Ark., on duty at Fort Brady, Mich., to Miss Eva Isabelle Feetham, of Sault Ste. Marie, Mich., May 24.

Douglas Heath Nisbet, Lieut., M. C., U. S. Army, Boston, on duty at Charlotte, N. C., to Miss Thelma Russell of Marlboro, Mass., May 7.

James Michael McTiernan, New York City, to Miss Florence Morgan Cadwell of Hartford, Conn., in New York City, May 17.

Montague Laffitte Boyd, Atlanta, Ga., to Miss Margaret Phillips of La Grange, Ga., recently.

Thomas Rodman Goethals, Boston, to Miss Mary Addison Webb of Washington, D. C., June 3.

Julius Hiram Comroe, to Miss Catherine L. Baker, both of York, at Philadelphia, May 16.

Robert Addison Milliken, Indianapolis, to Miss Mildred Post of New Orleans, May 20.

Deaths

James Herbert Stowell ⊕ Chicago; Northwestern University Medical School, Chicago, 1881; aged 65; a specialist in internal medicine; a member of the council of the Chicago Medical Society and president of the Society in 1900-1901; once chairman of the Medical Section of the Illinois State Medical Society; a member of the consulting and examining board of Cook County Hospital; attending physician to the Chicago, Baptist and Samaritan hospitals; medical director of the United States Annuity and Life Insurance Company; died suddenly at his home, May 31, from heart disease.

Nelson R. Gilbert, Bay City, Mich.; Cleveland University of Medicine and Surgery, 1871; aged 77; president of the board of control of the Home for the Feeble-Minded and Epileptics, Lapeer, Mich.; for four years treasurer of Otsego County; for six years chairman of the board of health, and city physician of West Bay City, and for many years physician of Bay County; died at his home, May 19.

Alexander Lyle ⊕ New York City; New York University, New York City, 1888; aged 52; professor of surgery in the Polyclinic Medical School and Hospital, New York City, since 1908; attending surgeon to the City Hospital, Blackwell's Island; a fellow of the New York Academy of Medicine; died at his home, May 23.

Samuel Hendrickson, Jamaica, N. Y.; College of Physicians and Surgeons in the City of New York, 1875; aged 69; a member of the visiting staff of St. Mary's Hospital, Jamaica; at one time sanitary superintendent of the department of health for Queens' County; died at his home, May 20, from heart disease.

Roderick Colin McLennan, Syracuse, N. Y.; College of Physicians and Surgeons in the City of New York, 1886; aged 61; consulting surgeon to the Syracuse Women's and Children's Hospital; a charter member and once president of the Syracuse Academy of Medicine; died at his home, May 15.

Edwin Field Sampson ⊕ Lieut., M. C., U. S. Army, New York City; Harvard Medical School, 1909; aged 36; on duty at Camp Zachary Taylor, Louisville, Ky.; a member of the staff of Bellevue Hospital; died at the base hospital, Camp Taylor, April 22, from hemolytic streptococcus pyemia.

John Herman Eden, New York City, and Great Neck, L. I., N. Y.; Yale University, New Haven, Conn., 1873; aged 69; formerly a member of the staff of Bellevue Hospital; died at his home in Great Neck, May 19, from heart disease.

William Bernard Rasing ⊕ Cleveland, Ohio; Cleveland College of Physicians and Surgeons, 1908; aged 33; a member of the Cleveland Academy of Medicine; a specialist in urology; died at his home, May 20, from pneumonia.

Simpson Matthew Ekermeyer, New Bremen, Ohio; Eclectic Medical Institute, Cincinnati, 1881; aged 58; a member of the Ohio State Medical Association; died in a sanitarium in Columbus, Ohio, May 5, from cerebral hemorrhage.

James Mitchell Taylor, Chicago; Homeopathic Medical College of Missouri, St. Louis, 1869; aged 71; a member of the Illinois State Medical Society; died at his home, May 26, from pneumonia following a surgical operation.

Nathaniel L. Edwards, Bluefield, W. Va.; (license, West Virginia, 1900); aged 49; a colored practitioner; proprietor of the Mercer Sanitarium, Bluefield; died at that place, February 24, from meningitis following influenza.

Edwin Everett Smith, Cold Spring, N. Y.; Long Island College Hospital, Brooklyn, 1871; aged 74; a psychiatrist; a life member of the Medico-Psychological Association; died at his home, May 24, from valvular heart disease.

Myron Lawrence Marr, Dorchester, Boston; Bowdoin Medical School, Brunswick and Portland, Me., 1879; who had been in the construction business for several years; died in New York, May 21, after a surgical operation.

August Beil, Selby, S. D.; New York Homeopathic Medical College, New York City, 1896; aged 56; a member of the South Dakota State Medical Association; died at his home, April 17, from disease of the heart and kidney.

Bertha Barbara Schroeder, Chicago, Loyola University, Chicago, 1908; aged 34; a member of the Illinois State Medical Society; died in Mercy Hospital, Chicago, June 1, from heart disease.

George Washington Carr, Fort Deposit, Ala.; University of Pennsylvania, Philadelphia, 1855; aged 84; a surgeon in the Confederate Service throughout the Civil War; died at his home, May 11.

William Wheeler Squire, Visalia, Calif.; Hahnemann Medical College, Chicago, 1876; Rush Medical College, 1875; aged 71; formerly mayor of Visalia, died at his home, May 17, from cancer.

Henry A. Bremmer, Ashton, Ill.; Chaddock School of Medicine, Quincy, Ill., 1886; aged 67; health officer of Ashton; died in the Lincoln (Ill.) Hospital, May 11, from heart disease.

Frank Litten ⊕ Austin, Tex.; Jefferson Medical College, 1887; aged 54; was found dead in his automobile, in the mountains about seven miles from Austin, May 16.

Samuel Thomas Tapscott, Searcy, Ark.; Memphis, Tenn.; Medical College, 1858; aged 85; for forty years a resident of Searcy; died at his home, May 14.

Commodore P. Barrett, Mount Vernon, Ind.; Hospital College of Medicine, Louisville, Ky., 1898; aged 49; died at his home, March 17, from brain tumor.

Charles E. Emerick, Harrisburg, Pa.; University of Pennsylvania, Philadelphia, 1886; aged 62; died at his home, May 4, from erysipelas.

Robert Franklin Burton, Little Rock, Ark. (license, State Medical Board, Arkansas, 1903); aged 44; died in Fowler, Colo., May 4.

Valentine Jacob Bold, Philadelphia; Jefferson Medical College, 1890; aged 50; died at his home, May 21, from heart disease.

Frederick W. F. Riehl, Alameda, Calif.; University of Berlin, Germany, 1867; aged 76; died at his home, May 21.

⊕ Indicates "Fellow" of the American Medical Association.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

COLLOSOL PREPARATIONS

Report of the Council on Pharmacy and Chemistry

The Council has adopted and authorized publication of the report which appears below declaring "Collosol Argentum," "Collosol Arsenicum," "Collosol Cocain," "Collosol Cuprum," "Collosol Ferrum," "Collosol Hydrargyrum," "Collosol Iodin," "Collosol Manganese," "Collosol Quinin" and "Collosol Sulphur" inadmissible to New and Nonofficial Remedies, because their composition is uncertain (conflict with Rule 1). In the few cases in which the therapeutic claims for these preparations were examined, the claims were found to be so improbable or exaggerated (conflict with Rules 6 and 10) as to have necessitated the rejection of these products.

W. A. Puckner, Secretary.

The Anglo-French Drug Co., Ltd., London and New York, in November, 1918, requested the Council to consider the products "Collosol Argentum," "Collosol Arsenicum," "Collosol Cocain," "Collosol Cuprum," "Collosol Ferrum," "Collosol Hydrargyrum," "Collosol Iodin," "Collosol Manganese," "Collosol Quinin" and "Collosol Sulphur." The term "Collosol" appears to be a group designation for what are claimed to be permanent colloidal solutions, marketed by the Anglo-French Drug Co., Ltd. Were this claim correct, "Collosols" should contain their active constituents in the form of microscopic or ultramicroscopic suspensions, protected against spontaneous precipitation by the presence of proteins or some similar "stabilizers."

According to the original patent specifications for Collosols, the metals are precipitated or treated with "peptone," which acts as the suspending or stabilizing agent. The method of using the peptone makes it doubtful, in the first place, whether the major part of the metals is present in colloidal form, or merely in the form of peptonates, i. e., as ordinary salts. Moreover, the later patents indicate that the products have been unsatisfactory; "experience having shown that some metal colloids under certain conditions not yet fully understood have the tendency to break down after a certain period" (U. S. patent No. 1,116,247). Phenol, it is claimed, has a tendency to counteract this decomposition, and the patent covers the use of phenol for this purpose.

It is difficult to see how phenol could possibly have such action. In fact, it obviously does not, for a number of the samples of Collosols submitted to the Council had separated. For instance, "Collosol Hydrargyrum" was not a colloidal solution at all, but a suspension of a coarse powder. The ampules of "Collosol Ferrum" contained a considerable quantity of flocculent precipitate. If either of these preparations were injected intravenously as directed, death might result, making the physician morally if not legally liable.

The recklessness of the claims is further illustrated by the advice that these indefinite mixtures of poisonous metals can be injected in unlimited quantities. Thus, Henry Crookes stated (*Chemical News*, May 7, 1914, p. 218) that Collosols "contain so small a proportion of metal, viz., 1 in 2000, that even a poisonous body like arsenic can be used with impunity." He stated that they may be applied as a lotion, intramuscular or intravenous injection, and that "one pint or more can be injected intravenously."

In the case of "Collosol Cocain," as was brought out in the Council's report published in The Journal, April 12, 1919, the manufacturers have admitted that the product is not what they have claimed—and still claim—for it. The report of the A. M. A. Chemical Laboratory showed that "Collosol Cocain," instead of containing 1 per cent. cocain as claimed, contained, in fact, at most not more than 0.4 per cent. cocain.

The report of the A. M. A. Chemical Laboratory on the Collosol products was sent by the Council to the New York office of the Anglo-French Drug Co., Ltd., in duplicate, in order to facilitate reference to the London office. This was some months ago. The information which the Council requested has not yet been received, nor has the Anglo-French Drug Co., Ltd., indicated its intention of supplying such information. On the other hand, claims to which specific objection have been made, continue to appear in current advertising. Accordingly, the Council authorizes publication of this report, and declares the Collosol preparations previously named ineligible to New and Nonofficial Remedies.

Correspondence

"MALARIA CONTROL IN THE FUTURE"

To the Editor:—My attention has been drawn to an editorial appearing in The Journal (**72**:1465 [May 17] 1919), entitled, "Malaria Control in the Future." I feel that I must take exception to this editorial on most important matters both of principle and of fact. First, in the fore part of the editorial is the statement:

> Few organizations or governments could aspire to cope with the malaria problem as efficiently and successfully as is likely to be done by the International Health Board of the Rockefeller Foundation. . . .

I cannot too strongly condemn a statement of this character appearing in the columns of a journal such as The Journal of the American Medical Association, for the following reasons: 1. It apparently concedes the hopelessness of the control of malaria as an official governmental activity, either of the federal government or of the states. This is not only absolutely wrong in principle, but is not in accord with the facts. 2. Not only is the United States Public Health Service at the present time engaged in cooperation with states and localities in eradicating malaria in seventeen different localities and in nine different states, but during the war it instituted malaria control in connection with the work of extracantonment sanitation over an area ten times as great as the Panama Canal Zone. At present it has on active duty the finest and most experienced corps of medical officers and engineers, conversant with the work of malaria eradication, which has ever been brought together in the history of the world. The Public Health Service is prepared to maintain this corps of specially trained experts and to add to it for aiding states and municipalities in eradicating malaria. Moreover, owing to the stimulus given to this work by the Public Health Service, practically $750,000 was raised locally during the year 1918 by various municipalities and counties for the purpose of controlling malaria, the operations being supervised by the Public Health Service.

Does this appear as if "few organizations or governments could aspire to cope with the malaria problem as efficiently and successfully as is likely to be done by the International Health Board of the Rockefeller Foundation"?

Passing now from a discussion of the principle contained in the statement, to matters of fact, we find in this editorial that the work of the Rockefeller Foundation in the eradication of malaria has been confined to two specific demonstrations: (*a*) the sterilization of human carriers by the administration of quinin, and (*b*) the control of malaria in one community by screening. The impression given by the editorial is that work of this character had never been done before in this country on such an extensive scale.

The editorial does not state that the plans for this work were prepared by the late Surg. R. H. von Ezdorf of this service, who lost his life in this work, nor that Dr. H. A. Taylor, who was field director at Crosset, received his training in the U. S. Public Health Service, and was transferred from that service to the International Health Board, and that this experimental work was carried out under the immediate supervision of an officer of the federal Public Health Service. Moreover, the first report of this demonstration was published as Public Health *Bulletin No. 88* of this service, in September, 1917. The editorial is singularly unmindful of the fact that field investigations of malaria have been actively and extensively pursued by the Public Health Service since 1912, and demonstrations in the control of malaria have been carried on by the service on an increasing scale until in 1918 the expenditures of the Public Health Service for demonstrations in the control of malaria were in the neighborhood of $1,000,000.

In view of the fact, therefore, that the control of malaria must in this country be a function of official and governmental rather than of unofficial and private agencies, and that this editorial not only ignores the extensive work of the Public Health Service, but implies that malaria control of the future, far from being a government matter is to be conducted by private and unofficial agencies, such as the International Health Board, I cannot but deprecate this publication at a time when the federal Public Health Service requires the fullest support for the necessary increase of its work. Furthermore, the whole tone of the editorial apparently concedes the futility of handling these problems by governmental agencies, and tends to create the impression that such important national health problems must be left to the unofficial and private agencies of the country to solve.

In conclusion, I may say that while at present in sparsely settled districts it may not be practicable for local communities to undertake measures for malaria eradication, the experience of the Public Health Service has shown that, far from being impracticable to induce communities to bear the expense of this work, it is becoming easier all the time; and furthermore the government now has pending before Congress a proposal to buy farm homes for soldiers by utilizing certain areas formerly uninhabitable because of malarial conditions, and to make these habitable and economically productive by the extensive use of malaria control measures which will be undertaken by the Public Health Service.

RUPERT BLUE, Surgeon-General.

ADMINISTRATION OF ARSPHENAMIN

To the Editor:—In his recent communication the director of the Hygienic Laboratory, after detailing what he considers the most important points—adequate dilution and slowness of administration—concludes: "Any physician who fails to observe these precautions should be considered as directly responsible for serious results that follow the improper use of this drug."

This statement, if unchallenged, may prove embarrassing to those physicians whose method of administration differs from that advocated. For the past eighteen months, both in private practice and in the out-clinic work at Touro Infirmary, I have abandoned the large dilutions and the gravity method of giving arsphenamin for the syringe and concentrated solutions. During this period, I have given, or supervised the giving of, approximately 2,000 injections of arsphenamin by the latter method. Our routine practice is to dissolve 0.6 gm. of the drug in 20 c.c. of freshly distilled water. The average dose given to an adult man of normal weight is 0.5 gm. and to a woman, 0.4 gm. In fresh infections, especially before the onset of a positive Wassermann test, we commonly give 0.6 gm. to the man and 0.5 gm. to the woman, repeating this dose weekly for three doses, and then give at least two more injections at longer intervals, with mercury and iodids in some form between and following the later injections.

Not merely once, but hundreds of times, I have injected 0.6 gm. arsphenamin in 20 c.c. of water in from twenty to thirty seconds without the slightest unpleasant results, either immediate or delayed. The slowness of the injection, on which Dr. McCoy lays so much stress, may be of importance when a large quantity of fluid is being introduced, but when the quantity is as small as 20 c.c., rapidity of injection is not significant. Our patients, except a few high-strung persons, are hardly aware that they have taken medication. Even the so-called "nitroid crises" are unusual when the syringe method is used. Since we have been using this method, we have seen less of other complications. We have had no fatalities, only one case of severe nephritis, now entirely well, but one case of jaundice, and four cases of toxic dermatitis preceded by hyperpyrexia. In our series of 2,000 injections, the results will compare favorably with those of other clinics, no matter what method of administration is followed.

The syringe method and concentrated solutions of arsphenamin, because of greater simplicity of administration and saving of time involved, is the method of choice in a busy clinic. It is at least as safe as the technic advocated by Dr. McCoy.

At present I rarely use neo-arsphenamin either in clinic or office practice. While I have had experience with all of the preparations of arsphenamin available, I routinely use that put out by the Dermatological Laboratory of the Philadelphia Polyclinic. The fact that we dissolve this preparation in boiling water without hesitation, and that our results have been uniformly good with it, has made us disinclined to change.

Success in the administration of arsphenamin depends chiefly on the following points: first, the selection of a reliable preparation; second, the use of freshly distilled, boiled water, both for dissolving the arsphenamin and for the sodium hydroxid solution; third, care in selecting the patient and adjusting dosage and frequency of repetition.

A. NELKEN, M.D., New Orleans.

FAS EST ET AB HOSTE DOCERI

To the Editor:—I note with surprise, not to say indignation, that in recent issues of THE JOURNAL abstracts from the *Deutsche medizinische Wochenschrift, Berlin,* have appeared. I wonder what the views of THE JOURNAL'S readers are regarding this untimely recognition of German medical science? Is it possible we are so in need of our enemies' Kultur that we must have it while a state of war still exists between Germany and the United States? Have we as a profession so soon forgotten the refined barbarities, worked out with such patience and success in the laboratories of German scientists and by their dictation and direction so relentlessly carried out by their ignorant tools, the personnel of their armies? Poison gas, liquid fire, ablation of the breasts of women as a token and a warning that they have been ravaged by those who knew themselves to be infected with loathsome diseases — the whole long list of inhuman, almost unmentionable acts — these were not thought out by the German war lords, however much they gloried in them. They were the direct products of German chemists, German sanitarians, German doctors.

With thousands of our boys still standing their watch on the Rhine, with thousands still in military hospitals recovering as far as they may from the wounds of an absolutely unjustifiable war, with those other thousands, hurried to untimely graves on foreign soil, do we ever want more of German science? Can we so soon forget these facts and give aid to the only too apparent renaissance of German propaganda by according its science a place in our national medical journal?

We know how we have been humbugged by purchasing at exorbitant prices literal ship-loads of worthless coal-tar derivatives because they were heralded by the paid testimonials of Herr Professor This, That and the Other. We know the "Made in Germany" stamp put on hundreds of really meritorious discoveries stolen or elaborated from the work of English, French, American and other workers. These facts alone should be enough to make us a bit wary of German science.

But with this deluge of blood scarce staunched, it seems to me most unfitting—nay worse—to give the slightest recognition to German medicine. They are still belligerent. They are absolutely unrepentant, still snorting fire and considering themselves undefeated supermen. Even their peace delegates are haughty, overbearing, ungracious—pigs.

Many think the peace terms too easy. The worst punishment rests with the people. Germans crave publicity. They live and thrive on the reputation of their products carefully built up by this publicity. Ignore them! Condemn them to innocuous desuetude! Their language has been dropped from the school curriculum. Good! Drop their science from our literature. Alas, that it was ever taken up again! If we cannot live without it, let us die patriotically!

Ross G. Loop, M.D., Elmira, New York.

PROTECTION AFFORDED OKLAHOMA HOGS FROM UNQUALIFIED VETERINARIANS

To the Editor:—The following item from the Dallas (Texas) *News* illustrates a principle familiar to every member of the medical profession:

> Oklahoma City, Okla., May 27.—Complaints are being received by J. A. Whitehurst, president of the State Board of Agriculture, from graduate veterinarians that provisions of the 1916 statute relative to vaccinating hogs for cholera place an unnecessary burden upon the veterinarians in requiring examination and bond before they can apply the simultaneous serum and virus vaccination. Mr. Whitehurst applied to the attorney general for an opinion in the matter, and the reply is that however severe the burden may be there is no way to relieve it, and that the provisions of the law must be complied with. Laymen, veterinarians, physicians and all are placed in the same category, says the opinion of the attorney general. They must pass a satisfactory examination at the hands of the veterinary department of the A. & M. College and put up a bond of $1,000 to be approved by the Board of Agriculture.

In this state as well as in many others, the chiropractor and the Christian scientist do business without leave. They practice on human beings, no matter how serious the ailment may be. The osteopaths have to take an examination in their own peculiar theories, though they are allowed to apply these extraordinary theories in the treatment of any disease, chronic or acute. But the poor veterinarian has to qualify professionally and in addition put up a thousand dollar bond before he is allowed to dose the swine! It is said that the most convulsive type of humor is sometimes born of tragedy.

S. H. Landrum, Altus, Okla.

"LIPOVACCINES"

To the Editor:—Allow me to direct your attention to an error in the editorial on "Lipovaccines" in The Journal, May 3, 1919, p. 1297. It is stated that "Le Moignic and Pinoy were the first to substitute oils for the physiologic sodium chlorid solution previously used in making vaccines. . . ." So far as I am able to ascertain the first lipovaccines were made, and their use applied in the prevention and treatment of disease, by myself in 1913 and 1914, and mention of this fact was made in an article entitled "The Vaccine Treatment of Gonorrhea" which appeared in The Journal in 1915. The fact that my associates and I found such vaccines of doubtful utility and abandoned their use is not of material importance in the present consideration. No reference to the work of Le Moignic and Pinoy was given in the editorial, but their article appeared in 1916 (*Compt. rend. Soc. de biol.*, lxxix, p. 201), a year following the note of my own above mentioned.

Carl C. Warden, M.D., Ann Arbor, Mich.

"IDENTITY OF THE POPPY IN FLANDERS' FIELDS"

To the Editor:—There would seem to be some doubt from recent letters to The Journal respecting the particular poppy "in Flanders' fields." This is *Papaver rhoeas*, the common red, or corn, poppy. It flourishes abundantly in the wheat fields of Europe, and many writers have remarked that the crop of poppies the season after a battle is increased. This is probably due to additional fertilization. The fresh petals are supposed to possess slightly narcotic properties. A syrup prepared from these petals has been used as a coloring ingredient. Medicinally the plant is practically valueless, and has of course no connection with *P. somniferum*, the opium poppy, which is the one so often mentioned in connection with sleep by the poets, as:

> "The end of all, the poppied sleep" (Swinburne).

Francis H. Mead, M.D., San Diego, Calif.

Queries and Minor Notes

Anonymous Communications and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

STATISTICS ON ARMY EXAMINATIONS AND VENEREAL DISEASE

To the Editor:—Please send me at your convenience full data concerning: (1) the number of our boys examined medically for the army; (2) number of white men; (3) number of colored men, and (4) percentage of those with venereal disease.

Fanny R. Smith, Chicago.

Answer.—1. The Second Report of the Provost Marshal-General, up to Dec. 20, 1918, indicates that the total number of men examined physically under the Selective Service Law was 3,208,446, of whom 2,259,027—70.41 per cent.—were found physically qualified in Group A; 88,436—2.76 per cent.—were in the remediable Group B; 339,377—10.58 per cent.—were in the limited service Group C, and 521,606—16.25 per cent. —were found physically disqualified and placed in Group D. Out of the 2,124,193 men inducted into service, 172,000, or 8.1 per cent., were rejected later in camp.

2. Of the 3,208,446 men examined, 2,749,608 were white.
3. The colored men numbered 458,838.
4. Out of 467,694 men rejected, both in camp and by local boards, 6,235, or 1.3 per cent., were rejected because of venereal disease. The relative numbers of colored and white with venereal disease are not yet available.

SCARLET FEVER AND DIPHTHERIA STATISTICS IN TEN LARGE AMERICAN CITIES FOR 1917 AND 1918

To the Editor:—Will you please give me the morbidity and mortality statistics of scarlet fever and diphtheria for 1917 and 1918 in the following cities: Baltimore, Boston, Buffalo, Chicago, Cincinnati, Cleveland, New York, Philadelphia, Providence and Toronto?

E. V. Murphy, Montreal, Canada.

Answer.—The morbidity and mortality statistics for scarlet fever and diphtheria in these cities, as reported to us by the health officers, are:

	Population Estimated by U.S. Census Bureau as of July 1, 1916	Scarlet Fever				Diphtheria			
		Morbidity		Mortality		Morbidity		Mortality	
		1917	1918	1917	1918	1917	1918	1917	1918
New York...	5,602,841	6,260	4,460	120	177	12,624	11,455	1,158	1,245
Chicago	2,497,722	13,444	1,809	623	48	10,290	5,708	1,228	720
Philadelphia..	1,709,518	1,464	1,384	31	43	3,141	2,477	441	384
Boston	756,476	1,497	1,126	46	24	4,098	2,832	278	217
Cleveland ...	674,073	618	408	14	11	1,856	1,371	155	109
Baltimore ...	589,621	544	366	11	8	690	671	58	71
Buffalo	468,558	560	632	30	18	1,009	975	108	112
Cincinnati ...	410,476	411	279	15	3	814	733	51	43
Toronto	376,538*	548	1,096	13	33	1,445	1,263	82	97
Providence ...	254,960	423	355	15	18	934	729	80	56

* Toronto population according to 1911 census.

"CAPTAIN OF THE MEN OF DEATH"

To the Editor:—In the interest of accuracy allow me to direct attention to a rather flagrant misquotation in your issue of May 24, page 1541, near the foot of the first column where pneumonia is called "master of the men of death." This should be, I believe, "captain of the hosts of death."

C. Reiterman, M.D., Los Angeles.

Answer.—Neither of the quotations is correct. According to Sir William Osler, Bunyan bestowed on tuberculosis the name of "captain of the men of death." Osler himself says: "One of the most widespread and fatal of all acute diseases, pneumonia, has become the 'captain of the men of death,' to use the phrase applied by John Bunyan to consumption."

ADALIN

To the Editor:—Will you kindly inform me what adalin is? It was brought to my attention in a prescription written by a St. Louis physician, but I am unable to find any literature on the subject.

Stephen Fisher, M.D., New Salem, N. D.

Answer.—Adalin is bromdiethyl-acetylcarbamid, and is described in New and Nonofficial Remedies, 1919, page 64. It is said to be an efficient sedative, reducing excitement and promoting sleep in conditions in which a powerful hypnotic is not required.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama: Montgomery, July 8. Chairman, Dr. S. W. Welch, State Capitol, Montgomery.

Arizona: Phoenix, July 1. Sec., Dr. Allen H. Williams, 219 Goodrich Bldg., Phoenix.

California: San Francisco, June 23-26. Sec., Dr. Charles B. Pinkham, 904 Forum Bldg., Sacramento.

Colorado: Denver, July 2. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.

Connecticut: New Haven, July 8-9. Sec., Regular Bd., Dr. Charles A. Tuttle, 196 York St., New Haven; Sec., Homeopathic Bd., Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven; Sec., Eclectic Bd., Dr. James E. Hair, 730 State St., Bridgeport.

Delaware: Wilmington, June 17-19. Sec., Dr. H. W. Briggs, 1026 Jackson St., Wilmington.

District of Columbia: Washington, July 8-10. Sec., Dr. E. P. Copeland, The Rockingham, Washington.

Florida: Jacksonville, June 16-17. Sec., Dr. W. M. Rowlett, Citizens Bank Bldg., Tampa.

Florida: Eclectic Board, Jacksonville, June 9-10. Sec., Dr. G. A. Munch, 1306 Franklin St., Tampa.

Illinois: Chicago, June 16-19. Supt. of Registration, Mr. F. C. Dodds, Springfield, Ill.

Iowa: Iowa City, June 12-14. Sec., Dr. Clifford H. Sumner, Capitol Bldg., Des Moines.

Kansas: Topeka, June 17. Sec., Dr. H. A. Dykes, Lebanon.

Kentucky: Louisville, July 1-3. Sec., Dr. J. N. McCormack, Bowling Green.

Louisiana: New Orleans, July 1-3. Sec., Dr. E. W. Mahler, 141 Elk Place, New Orleans.

Maine: Augusta, July 1-2. Sec., Dr. Frank W. Searle, 776 Congress St., Portland.

Maryland: Baltimore, June 18-21. Sec., Dr. J. McP. Scott, Hagerstown.

Massachusetts: Boston, July 8-10. Sec., Dr. Walter P. Bowers, State House, Boston.

Michigan: Ann Arbor, June 10-12. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

Mississippi: Jackson, June 24-25. Sec., Dr. W. S. Leathers, University.

Missouri: St. Louis, June 9-11. Sec., Dr. George H. Jones, State House, Jefferson City.

Nebraska: Lincoln, June 30-July 2. Sec., Dr. H. J. Lehnhoff, 514 First National Bank, Lincoln.

New Jersey: Trenton, June 17-18. Sec., Dr. Alex. MacAlister, 438 E. State St., Trenton.

New Mexico: Santa Fe, July 14. Sec., Dr. R. E. McBride, Las Cruces.

New York: Albany, Buffalo, New York and Syracuse, June 24-27, Mr. George M. Wiley, director, Exam. and Inspections Div., State Edu. Bldg., Albany.

North Carolina: Raleigh, June 23. Sec., Dr. H. A. Royster, 423 Fayetteville St., Raleigh.

North Dakota: Grand Forks, July 1-4. Sec., Dr. G. M. Williamson, 860 Belmont Ave., Grand Forks.

Oklahoma: Oklahoma City, July 8-9. Sec., Dr. J. J. Williams, Weatherford.

Oregon: Portland, July 1-3. Sec., Dr. Frank W. Wood, 559 Morgan Bldg., Portland.

Pennsylvania: Philadelphia and Pittsburgh, July 8-10. Sec., Nathan C. Schaeffer, State Capitol, Harrisburg.

Rhode Island: Providence, July 10-11. Sec., Dr. B. U. Richards, State House, Providence.

South Carolina: Columbia, June 10. Sec., Dr. A. Earle Boozer, 1806 Hampton St., Columbia.

South Dakota: Deadwood, July 8. Sec., Dr. P. B. Jenkins, Waubay.

Tennessee: Knoxville, Memphis and Nashville, June 13-14. Sec., Dr. A. B. De Loach, Exchange Bldg., Memphis.

Texas: Austin, June 24-26. Sec., Dr. M. F. Bettencourt, Mart.

Utah: Salt Lake City, July 7-8. Sec., Dr. G. F. Harding, 407 Templeton Bldg., Salt Lake City.

Vermont: Burlington, June 26-28. Sec., Dr. W. Scott Nay, Underhill.

Virginia: Richmond, June 17-20. Sec., Dr. J. W. Preston, 215 S. Jefferson St., Roanoke.

Washington: Seattle, July 1-3. Sec., Dr. C. N. Suttner, 415 Old National Bank Bldg., Spokane.

West Virginia: Huntington, July 8-10. Sec., Dr. S. L. Jepson, Masonic Bldg., Charleston.

Wisconsin: Milwaukee, June 24-26. Sec., Dr. J. M. Dodd, 220 E. 2nd. St., Ashland.

Wyoming: Cheyenne, June 23-25. Sec., Dr. H. E. McCollum, Laramie.

Massachusetts January Examination

Dr. Walter P. Bowers, secretary of the Massachusetts Board of Registration in Medicine, reports the oral, written and practical examination held at Boston, Dec. 31, 1918, Jan. 2, 16 and 17, 1919. The examination covered 13 subjects and included 70 questions. An average of 75 per cent. was required to pass. Five candidates were examined, all of whom passed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Chicago College of Medicine and Surg.	(1913)	75
Maryland College of Eclectic Medicine and Surg.	(1914)	75
New York Homeopathic Medical College	(1894)	75
Medical College of Ohio	(1906)	80.4
Vanderbilt University	(1912)	81.5

Rhode Island April Examination

Dr. B. U. Richards, secretary of the Rhode Island State Board of Health, reports the written and practical examination held at Providence, April 3-4, 1919. The examination covered 7 subjects, and included 70 questions. An average of 80 per cent. was required to pass. Of the 7 candidates examined, 3 passed and 4 failed. The following colleges were represented.

College	Year Grad.	Per Cent.
PASSED		
Yale University	(1915)	93.9
Tufts College	(1916)	83.7
University of Vermont	(1911)	89.5
FAILED		
University of Maryland	(1917)	75.7
Tufts College	(1917)	78.2
College of Physicians and Surg. Memphis	(1911)	78.8
Laval University	(1912)	75.5

Book Notices

Notes on Pathological and Operative Obstetrics. By Lyle G. McNeile, M.D., Professor of Obstetrics, College of Physicians and Surgeons, Medical Department of the University of Southern California. Cloth. Price, $2. Pp. 221. Los Angeles: The Division of Obstetrics, College of Physicians and Surgeons, Medical Department of the University of Southern California, 1919.

The effort of the author has been to correlate "the essentials of pathologic obstetrics, presented in such a form as may, perhaps, be suitable for senior medical students, or for busy practitioners." This he has accomplished in a thorough manner. The book is apparently based on the published notes of the late Herbert M. Stowe, which the author has amplified and brought up to date. New subject matter has been added, especially on the topic of cesarean section, concerning which a criticism of his stand on repeated section might justly be made. "Once a cesarean, always a cesarean" has not become the accepted dogma, although McNeile adopts it.

A little more care might have corrected numerous typographic errors.

La Suspension dans le Traitement des Fractures. Appareils Anglo-Américans. Par P. Desfosses, Chirurgien de l'Hôpital brittannique de Paris et Charles-Robert, Ancien Interne des Hôpitaux de Paris. Préface de M. Pierre Duval. Paper. Price, 4 francs. Pp. 172, with illustrations. Paris: Masson et Cie, 1918.

Although this little monograph was written primarily for the army surgeon, the principles enunciated are as applicable to industrial accidents as they are to the accidents of war. The theme is the use of suspension in the treatment of fractures. The method of applying suspension, with traction, to suitable fractures of the upper and lower extremities, should it be thought desirable, is discussed with great care and illustrated profusely. The principle of the Thomas splint is made use of extensively and various modifications of the splint to meet the necessities of particular cases are clearly set forth.

Those who are handling fractures will find many useful suggestions in this little volume.

An Inquiry into the Medical Curriculum by the Edinburgh Pathological Club. Papers Contributed to the Inquiry and Report by the Pathological Club. Reprinted from the Edinburgh Medical Journal. Boards. Pp. 512. Edinburgh: W. Green & Son, 1919.

This volume is a reprint of a series of articles which appeared in the *Edinburgh Medical Journal* beginning January, 1918. The general topic was "The Training of the Student of Medicine." The series was completed in March, 1919. The reprint contains also the extensive discussions which followed the reading of the several articles before the Royal Medical Society and the Edinburgh Pathological Club. Seventy-two papers are included. There is also a report of the Pathological Club, giving an outline of the proposed courses of instruction in the various branches of the medical curriculum. This series of papers deserves a careful reading by all who are interested in the development of the curriculum in medical schools.

Medicolegal

Prescriptions Under Harrison Narcotic Drug Act

(Foreman v. United States (U. S.), 255 Fed. R. 621)

The United States Circuit Court of Appeals, Fourth Circuit, holds that an indictment was sufficient which charged in substance that the defendant did dispense, distribute and sell a derivative of opium to the persons named without a written order and not in the course of his professional practice. But the court reverses a judgment of conviction of defendant Foreman, on such an indictment, for error in the following instruction to the jury:

> And the court further charges you, as a matter of law, that the issuing of prescriptions by a registered physician to persons other than his patients, and in the course of his professional practice only, whereby they could procure and did procure the inhibited drugs, is a sale, a dispensing and distribution, of such drugs within the meaning of the act of Congress under which the accused is being prosecuted.

The court says that, resolving all conflicting testimony against the defendant, no direct sale, barter, exchange, or gift, and no dispensing or distribution that would denote participation in a sale, barter, exchange, or gift by him, was proved. He registered and paid the tax. Afterward he gave prescriptions for morphin and cocain to the persons named in the indictment, who were drug addicts, calling for such quantities of the drugs as to indicate that he was merely gratifying the craving of the addicts and that he was not seeking to cure them of the habit. The drugs were not furnished by the defendant. On the contrary, the prescriptions were carried by the recipients to different registered druggists and by them filled. There was no evidence that the defendant was interested in the business of any of the druggists, or had any arrangement to share the profits of the sales with them, or that he was agent for any druggist, or that he even knew where the prescriptions were to be carried. What the statute forbids is sale, barter, exchange, or gift, including such distribution and dispensing by a physician not in the course of his practice as would amount to a participation in a sale, barter, exchange, or gift. The mere issuance of a prescription by a physician to be filled by any druggist, without participation by the physician in the sale made under it, would not be a sale as charged in the indictment, or such distribution or dispensing as amounts to a sale. The instruction quoted was therefore erroneous.

Constitutionality of Harrison Narcotic Drug Act

(United States v. Doremus (U. S.), 39 Sup. Ct. R. 214)

The Supreme Court of the United States holds the Harrison Narcotic Drug Act to be constitutional, reversing a judgment of a district court in Texas which held Section 2 of the act unconstitutional for the reason that it was not a revenue measure, and was an invasion of the police power reserved to the states. The first count in the indictment charged in substance that the defendant, a physician, duly registered, and who had paid the tax required by the first section of the act, did unlawfully sell to one Ameris 500 one-sixth grain tablets of heroin, not in pursuance of a written order on a form issued on the blank furnished for that purpose by the commissioner of internal revenue. The second count charged that the defendant did unlawfully and knowingly sell, dispense and distribute to Ameris 500 one-sixth grain tablets of heroin not in the course of his regular professional practice and not for the treatment of any disease from which Ameris was suffering, but for the purpose of gratifying Ameris' appetite for the drug as a habitual user thereof.

The Supreme Court says that the act may not be declared unconstitutional because its effect may be to accomplish another purpose as well as the raising of revenue. If the legislation is within the taxing authority of Congress, that is sufficient to sustain it. Considering the full power of Congress over excise taxation the decisive question here is: Have the provisions in question any relation to the raising of revenue? That Congress might levy an excise tax on such dealers, and others who are named in Section 1 of the act, cannot be successfully disputed. The provisions of Section 2 aim to confine sales to registered dealers and to those dispensing the drugs as physicians, and to those who come to dealers with legitimate prescriptions of physicians. Congress, with full power over the subject, short of arbitrary and unreasonable action, which is not to be assumed, inserted these provisions in an act specifically providing for the raising of revenue. Considered of themselves, the Supreme Court thinks they tend to keep the traffic aboveboard and subject to inspection by those authorized to collect the revenue. They tend to diminish the opportunity of unauthorized persons to obtain the drugs and sell them clandestinely without paying the tax imposed by the federal law. This case well illustrates the possibility which may have induced Congress to insert the provisions limiting sales to registered dealers and requiring patients to obtain these drugs as a medicine from physicians on regular prescriptions. Ameris, being as the indictment charged, an addict, may not have used this great number of doses for himself. He might sell some to others without paying the tax; at least Congress may have deemed it wise to prevent such possible dealings because of their effect on the collection of the revenue. The Supreme Court cannot agree with the contention that the provisions of Section 2, controlling the disposition of these drugs in the ways described, can have nothing to do with facilitating the collection of the revenue, as it would be obliged to do if it were to declare this act beyond the power of Congress acting under its constitutional authority to impose excise taxes.

The Chief Justice and three other members of the Court dissent because of the opinion that the Court below correctly held the act of Congress, so far as it embraced the matters complained of, to be beyond the constitutional power of Congress to enact, because to such extent the statute was a mere attempt by Congress to exert a power not delegated, that is, the reserved police power of the states.

Answers to Questions on Harrison Narcotic Drug Act—What Not a Prescription

(Webb et al. v. United States (U. S.), 39 Sup. Ct. R. 217)

The Supreme Court of the United States says that this case came before it on a certificate from the Circuit Court of Appeals for the Sixth Circuit, from which certificate it appeared that Webb and one Goldbaum were convicted and sentenced in the District Court for the Western District of Tennessee on a charge of conspiracy to violate the Harrison Narcotic Law. The certificate stated that Webb was a practicing physician who had duly registered and paid the special tax as required by Section 1 of the act. Goldbaum was a retail druggist, and had also registered and paid such tax and kept all records required by the law. It was Webb's regular custom and practice to prescribe morphin for habitual users, on their application to him therefor. He furnished these "prescriptions," not after consideration of the applicant's individual case, and in such quantities and with such direction as, in his judgment, would tend to cure the habit, or as might be necessary or helpful in an attempt to break the habit, but with such consideration and rather in such quantities as the applicant desired for the sake of continuing his accustomed use. Goldbaum was familiar with such practice and habitually filled such prescriptions. Within a period of eleven months Goldbaum purchased from wholesalers thirty times as much morphin as was bought by the average retail druggist doing a larger general business, and he sold narcotic drugs in 6,500 instances. Webb regularly charged fifty cents for each so-called prescription, and within this period had furnished, and Goldbaum had filled, over 4,000 such prescriptions.

On these and other facts stated, the Circuit Court of Appeals propounded to the Supreme Court three questions:

> 1. Does the first sentence of Section 2 of the Harrison Act prohibit retail sales of morphin by druggists to persons who have no physician's prescription, who have no order blank therefor and who cannot obtain an order blank because not of the class to which such blanks are allowed to be issued?
>
> 2. If the answer to question one is in the affirmative, does this construction make unconstitutional the prohibition of such sale?
>
> 3. If a practicing and registered physician issues an order for morphin to a habitual user thereof, the order not being issued by him in

the course of professional treatment in the attempted cure of the habit, but being issued for the purpose of providing the user with morphin sufficient to keep him comfortable by maintaining his customary use, is such order a physician's prescription under exception (*b*) of Section 2?

The Supreme Court answers that what it has said of the construction and purpose of the act in *United States* v. *Doremus*, 39 Sup. Ct. R. 214, plainly requires that Question 1 should be answered in the affirmative. Question 2 should be answered in the negative for the reasons stated in the opinion in said case. As to Question 3—to call such an order for the use of morphin a physician's prescription would be so plain a perversion of meaning that no discussion of the subject is required. That question should be answered in the negative.

Registration and Tax Requirements of Harrison Act

(Blunt v. United States (U. S.), 255 Fed. R. 332)

The United States Circuit Court of Appeals, Seventh Circuit, in affirming a conviction of defendant Blunt, a physician, on a count that charged that he, as a dealer, unlawfully and feloniously sold to one Dean 2,000 grains of morphin sulphate, without having registered as a dealer and without having paid the special tax as such dealer, says that while the Harrison Narcotic Drug Act does not, in express words, require a separate registration and payment of tax as dealer and as physician, there is a clear differentiation between them as to the obligations imposed on them respectively under the act. They represent distinct classes; each class is required to pay the tax. And the combination of both occupations in one individual does not exempt him from payment of a separate tax as a dealer and as a physician. Section 3236 of the Revised Statutes of the United States, as a provision of existing law relating to special taxes, is expressly made applicable to the special tax imposed under Section 1. It provides that:

> Whenever more than one of the pursuits or occupations hereinafter described are carried on in the same place by the same person at the same time, except as hereinafter provided, the tax shall be paid for each according to the rates severally prescribed.

Furthermore, in accordance with the power vested in him under this Section 1, the commissioner of internal revenue, with the approval of the secretary of the treasury, made a regulation to the same effect, namely:

> Every person conducting more than one class or place of business or practicing more than one profession, or at more than one place, in which the narcotic drugs are sold, dispensed or given away, must register and pay the special tax for each profession and business separately, even though conducted at the same address, and separate records must be kept under each registration.

"A sale, dispensing or distribution" is permitted to a dealer for a customer on a written prescription; but only "a dispensing or distribution" is allowed to a physician treating a patient, and then only in the course of his professional practice.

A portion of Article 10 of the Revised Regulations of the Treasury Department, as of May 4, 1916, contained in Internal Revenue Regulations, No. 35, reads:

> A physician, dentist, or veterinary surgeon may not engage in the business of selling narcotic drugs unless he is a registered dealer, authorized by the state laws to engage in such business. Additional registration is not required, however, when narcotic drugs are sold to a patient on whom a physician, dentist, or veterinary surgeon is in personal attendance.

These sentences are to be construed in the light both of Article 1 and of that part of Article 10 immediately preceding the quoted sentences. So construed, the regulations clearly require a physician who acts as a dealer to register as such; but a sale to one in the course of his personal attendance on him as a physician does not necessitate registration as a dealer.

The sale here contemplated is a sale by him not as a dealer but as a physician; instead of "dispensing, distributing or administering" a dose of the narcotic as a part of his medical service, without a separate charge therefor, it may be that in some places physicians are accustomed to charge specifically therefor. While this might well be deemed a dispensing, yet as it could be held to be a sale, the regulations out of abundant caution provide that in such a case, doubtless because the physician is not then acting as a dealer, no additional registration is required.

In the instant case, however, the indictment charged and the evidence abundantly proved that, though the purchaser was registered as a patient, the sale was made to him by the defendant acting as a dealer, and not as a physician in personal attendance, administering or dispensing the drug as part of the professional service.

Social Medicine, Medical Economics and Miscellany

The Russell Sage Institute of Pathology

The Russell Sage Institute of Pathology was founded in 1907 by Dr. Theodore C. Janeway through funds obtained by him from Mrs. Russell Sage. The first president of the board of directors was Dr. E. G. Janeway, who held office until his death in 1910. Associated with the Janeways from the beginning were Drs. D. Bryson Delavan, Simon Flexner and Graham Lusk, as directors. On the death of Dr. E. G. Janeway, Dr. Lafayette B. Mendel was elected in his stead; and on the death of Dr. T. C. Janeway, in 1918, Dr. E. F. Du Bois was chosen to fill the vacancy.

The institute was originally located (1907-1912) at the New York City Hospital and the New York City Home, with Dr. Horst Oertel as scientific director. In 1912, the institute was transferred to Bellevue Hospital, Graham Lusk having been appointed scientific director, and Dr. Eugene F. Du Bois, medical director of the reorganized institute. Dr. F. C. Gephart became chemist to the institute.

The construction of a respiration calorimeter of the Atwater-Rosa type by the skilled mechanics, Messrs. Soderstrom and Riche, achieved an instrument of such accuracy that the hourly heat production of an individual, as directly measured, agreed within a slight variation with the calculation of the amount of heat as estimated from the quantity of oxygen absorbed. This apparatus was the first accurate respiration calorimeter established in any hospital. The work at first concerned itself with the establishment of a standard of measurement of the basal metabolism of normal persons from youth to old age, and the divergence from this standard of metabolism which was induced by food. In association with Dr. Warren Coleman, the metabolism during typhoid fever was exhaustively studied. Dr. Francis W. Peabody of Boston visited the institute and was associated with the study of patients with cardiac and renal disease. Dr. Frederic M. Allen of the Rockefeller Institute contributed to the extensive metabolism studies on diabetes. Dr. J. H. Means of the Massachusetts General Hospital aided in the work concerning the effect of radium therapy on lymphatic leukemia, and concerning the stimulating effect of caffein on normal metabolism. To these may be added the extensive investigation into the nature of the metabolism of exophthalmic goiter by Du Bois and into the metabolism in malarial fever by Drs. D. P. Barr and Du Bois. In the last described paper, the twenty-eighth and the one last published in the series entitled "Clinical Calorimetry," appearing in the *Archives of Internal Medicine*, it was announced that the heat loss from the body at the onset and during the chill remained unchanged from the level determined before the chill, and that the extra heat produced by the muscular contractions during the chill was retained in the body and was the immediate cause of the rise of body temperature.

The beginning of the war brought the work of the institute to an abrupt close, and there remain a few unpublished papers and some uncompleted work on the nature of night sweats in tuberculosis.

Before the war it had been arranged to open the institute in October, 1917, with Dr. Homer F. Swift as scientific director, who was also to have been director of medicine on the Cornell division of Bellevue Hospital. Associated with him were to have been Drs. W. W. Palmer, J. P. Peters, Jr., and

D. P. Barr. The project constituted an attempt to demonstrate the feasibility of establishing a great clinic based on medical research in connection with the largest municipal hospital in the country.

It is of happy augury for the future of American medicine that Col. Homer F. Swift, who is well known for his work in France on trench fever and who is now chief consulting physician to our army of occupation with headquarters at Coblenz, will return to take charge of the Russell Sage Institute in the capacity of scientific director, and that both Drs. Peters and Barr have already returned from France and have taken up the work. It is with grateful appreciation that one recognizes that the good that Mrs. Sage has done lives after her and witnesses the beneficent influence of her lifelong and often expressed desire to "relieve the sufferings and advance the welfare of mankind."

Study of Infant Mortality in Brockton

Brockton, Mass., was selected as the fifth unit in the studies of infant mortality being conducted by the National Children's Bureau because it is an industrial city with an infant mortality rate notably lower than the average rate for the registration area, and because it is a city of a single industry, the shoe industry, whose skilled operatives are employed at comparatively high wages, and trade union conditions prevail. The general death rate has shown a steady decrease from year to year. From 1910 to 1913, inclusive, Brockton had the lowest death rate of those cities of the state with a population of not less than 50,000; and from 1901 to 1910, inclusive, it had the lowest average annual death rate in cities of this group. The city also has a higher percentage of children in the high schools than other cities of the state of its class. Of the 1,247 registered births in the study, thirty-seven, or 3 per cent., were stillbirths. The deaths among the live-born infants numbered 117, giving an infant mortality rate of 96.7 for the year studied, Nov. 1, 1912, to Oct. 31, 1913. Nearly half the deaths occurred in the first month, and as many before the end of the first day as between the ages of 6 and 12 months; one third occurred in the first week, and more than one fifth before the infants were 1 day old. The number of stillbirths compares favorably with other towns, and is lower than that of some cities. The preponderance of early deaths from causes tabulated as diseases peculiar to early infancy, premature birth, congenital debility and injuries at birth, and the stillbirths, would point to the importance of prenatal care in their prevention. All but 19.7 per cent. of the infants who survived long enough to be fed at all were breast fed wholly or partially for some period of the first nine months of life; but of these, the number breast fed surviving by months from one to nine dwindled from 78.5 in the first month to 33.2 in the ninth. Deaths by months among 1,000 survivors compared between breast fed and artificially fed infants showed for the former during the first month 17.3 and for the latter, 30. This dwindled to 2.7 for the former and 5.2 for the latter during the period including the tenth, eleventh and twelfth months. As is usually the case, artificial feeding was practiced more extensively among native-born mothers. The economic status of the family, whether the mother worked or not, the diminution of income by slack time or illness, number in family, etc., were all found to be factors affecting the infant mortality. Civic conditions, such as milk and water supplies, sewage and garbage disposal, cleanliness of streets, housing, and smoke nuisance, were above the average, or at least in a satisfactory state. Alcohol was not a prominent factor in morbidity, as Brockton had a no-license law. The conclusion of the report is that while the infant mortality rate for Brockton was low for the period named as compared with other cities of like population under similar climatic conditions, owing to the high wages paid and the intelligence of the workers, and the fact that very few mothers were gainfully employed away from home, as well as to the generally good municipal sanitation, yet the rate as compared with that of other cities of similar size and general type of population does not seem to be commensurate with the advantages enjoyed.

Society Proceedings

COMING MEETINGS

American Medical Association, Atlantic City, June 9-13.

American Academy of Medicine, Atlantic City, June 9-10.
American Association of Anesthetists, Atlantic City, June 9-10.
Am. Assn. of Genito-Urinary Surgeons, Atlantic City, June 16-17.
Am. Assn. of Indust. Physicians and Surgeons, Atlantic City, June 9.
Am. Assn. of Pathologists & Bacteriologists, Atlantic City, June 16-17.
American Association of Physicians, Atlantic City, June 16-17.
American Climatological & Clin. Assn., Atlantic City, June 14-17.
American Dermatological Association, Atlantic City, June 16-18.
American Gastro-Enterological Assn., Atlantic City, June 9-10.
American Gynecological Society, Atlantic City, June 14.
American Medico-Psychological Assn., Philadelphia, June 18-20.
American Neurological Association, Atlantic City, June 16-18.
American Ophthalmological Society, Atlantic City, June 16-17.
American Orthopedic Association, Atlantic City, June 16-17.
American Otological Society, Atlantic City, June 16-17.
American Pediatric Society, Atlantic City, June 16-18.
American Proctologic Society, Atlantic City, June 7-9.
American Psychopathological Association, Atlantic City, June 19.
American Society of Tropical Medicine, Atlantic City, June 16-17.
American Surgical Association, Atlantic City, June 16-18.
Assn. for the Study of Internal Secretions, Atlantic City, June 9.
Congress American Phys. & Surgs. of N. A., Atlantic City, June 16-17.
Maine Medical Association, Portland, June 18-19.
National Tuberculosis Association, Atlantic City, June 14-17.
Nevada State Medical Association, Lake Tahoe, June 20-21.
New Jersey Medical Society, Spring Lake, June 24-25.
North Dakota State Medical Association, Grand Forks, June 24-25.
Southern Minnesota Medical Assn., Rochester, June 23-24.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Review of Tuberculosis, Baltimore

May, 1919, 3, No. 3

*Complement Fixation Reaction as Applied to Tuberculosis. P. A. Lewis, Philadelphia.—p. 129.
*Influence of Protein Intoxication on Tuberculous Infection in Guinea-Pigs. A. K. Krause and H. S. Willis, Maryland.—p. 153.
*Changes in Skin Sensitiveness to Tuberculin During Epidemic Influenza. A. L Bloomfield, and J. G. Mateer, Baltimore.—p. 166.
*Treatment of Acute Lung Abscess by Artificial Pneumothorax. B. Goldberg, and M. Biesenthal, Chicago.—p. 169.
Treatment of Tuberculous Cervical Adenitis. W. R. Abbott, Springfield.—p. 175.

Complement Fixation Reaction in Tuberculosis.—Lewis reports the results of studies that aimed primarily to determine, if possible, the lack of harmony that characterized the experience of different workers in the application of the complement fixation tests to tuberculosis. Lewis' investigations dealt mainly with such matters as the reaction time, the measure of completely bound complement, and titration against the antigen. He confirms the observations of others that certain tuberculous individuals give strong deviation reaction, while others entirely fail to react and certain apparently wholly normal persons also give strong reactions. His most important practical conclusion is that the numerical relations are such as to make it unsafe to apply the reaction to the diagnosis of tuberculosis, except as a matter of the most limited confirmatory interest. Methods hitherto applied in making the test have inherent defects that seriously impair its significance; but these have been remedied to a considerable extent by increasing the time of primary incubation or "period of fixation" to four hours and by employing several quantities of either complement or antigen simultaneously. By adding an equal quantity of glycerin the deviating qualities of tuberculous serums are reasonably well preserved, so that a temporary standard for the determination of the qualities of antigen may be established.

Influence of Protein Intoxication on Tuberculous Infection.—Krause and Willis continued their studies on whether infection with tubercle bacilli or already present tuberculous infection is modified by acute or chronic protein intoxication. Guinea-pigs that received continued and repeated infections of (homologous) tuberculo-protein and (heterologous) egg-white protein before infection were apparently less resistant to infection. After infection is established the repeated infections of heterologous protein (egg-white) did not appreciably influence the course of the infection. Repeated anaphylactic shock under the same conditions had no apparent influence on an already established infection. In the absence of specific tubercle the most intensive and frequently repeated application of tuberculo-protein failed to render the animals cutaneously hypersensitive. If tubercle was present, the repeated applications of heterologous protein (egg-white) had no effect on the cutaneous hypersensitiveness that had been produced by the tuberculous infection.

Skin Sensitiveness to Tuberculin During Influenza.—Bloomfield and Mateer have employed the cutaneous (Pirquet) tuberculin test on patients at the height and after the subsidence of acute influenza. Of nineteen cases so studied, all but one patient showed a complete inhibition of reactive capacity during the manifestation of symptoms of acute influenza. During convalescence reactivity returned in 89.4 per cent. of the cases. The return to maximum reactivity was gradual in most cases, as shown by successive tests. In ten of the cases, the first test made during the febrile stage was negative, while during convalescence it became markedly positive. In six, in which the temperature became normal on the day on which the test was done, or on the following day, there was a very slight reaction; and these were regarded as delayed and depressed reactions, since all these individuals later responded with prompt and strongly positive reactions.

Artificial Pneumothorax Treatment of Acute Lung Abscess.—Golberg and Biesenthal believe that this method offers distinctly better advantage of success than the ordinary medical and surgical procedures heretofore used. Collecting the sixteen cases thus far reported as having been treated by artificial pneumothorax, including the three in their own experience, the authors find that 75 per cent. of the patients have made a complete recovery, 12 per cent. have been improved, and 12 per cent. have died.

Annals of Medical History, New York

December, 1917, **1**, No. 4

First Printed Documents Relating to Modern Surgical Anesthesia. W. Osler, Oxford, Eng.—p. 329.
Byzantine Medical Fragments. C. Singer, Oxford, Eng.—p. 333.
Legislative and Administrative History of Medical Department of U. S. Army During Revolution (1776-1786). W. O. Owen, Washington.—p. 342.
The New York Medical College. A. Jacobi, New York.—p. 368.
Studies in Paleopathology. I. General Consideration of Evidences of Pathologic Conditions Found Among Fossil Animals. R. L. Moodie, Chicago.—p. 374.
Plague Tractates. D. W. Singer and R. Levy, Oxford, Eng.—p. 395.
Medical Phrases of Victor Hugo. H. A. Royster, Raleigh, N. C. —p. 412.

Boston Medical and Surgical Journal

May 22, 1919, **180**, No. 21

*Chordoma. E. M. Daland, Boston.—p. 571.
The Cancer Problem. F. Bryant, Worcester.—p. 576.
Rotation Deformities. C. L. Lowman, Los Angeles.—p. 581.
Articular Separation of Middle and Internal Cuneiforms with and without Fracture. F. W. O'Brien, Boston.—p. 585.
Hernia of Small Bowel into the Rectum. A. T. Downing, Littleton, N. H.—p. 586.
Case of Successfully Operated Wound of Heart. E. G. Crabtree, Boston.—p. 588.

Chordoma.—Daland cites the case of a woman, aged 30, who complained of hoarseness, headache and a swelling in the right side of the neck. Three years ago the patient suddenly became hoarse without any apparent cause. The hoarseness cleared up in three days and there was no further trouble for a year. Two years ago a severe headache developed and the hoarseness reappeared. Two days after manipulation by an osteopath a swelling appeared in the right postcervical region. Tinnitus was noticed in the right ear soon after this and it has persisted. One year ago the patient's right clavicle became more prominent and she was unable to lift her arm laterally over her head. The mass in the right postcervical region has increased in size and has at times been painful. Recently she has been nauseated frequently and has vomited occasionally, more in the morning. Behind and slightly below the right ear, extending downward on the neck and backward nearly to the median line was a mass the size of a hen's egg, firm, non-tender, and nonfluctuant. An incision was made over the growth and colloidlike material curetted out with free hemorrhage. Seven months after the operation the patient stated that her headaches had enirely disappeared. There is a recurrence of the mass in her neck and she has some pain. Microscopic sections from the tumor contained cells which tend to differentiate like those of the notochord. Much of its structure is of the embryonic type and resembles mucous connective tissue. Daland says that seventeen cases of tumors of notochordal tissue which have given clinical symptoms are recorded: Twelve of these are over the upper end and five over the lower end of the neural canal. Two of the seventeen patients have been successfully operated on. Death followed in the others. The case cited is the seventeenth case of chordoma. Although showing involvement of several cranial nerves, the patient is still alive.

Colorado Medicine, Denver

May, 1919, **16**, No. 5

Water Hemlock Poisoning. M. R. Stratton, Denver.—p. 104.
*Method of Hemostasis in Resecting Portions of Liver. L. Freeman, Denver.—p. 111.
Diet in Diseases of Blood and in Diseases of Thyroid. J. W. Amesse, Denver.—p. 113.
Influenza Vaccination at Denver City and County Hospital. M. Katzman, Denver.—p. 121.

Method of Hemostasis in Resecting Portions of Liver.—While removing a tumor from the liver hemorrhage was controlled by Freeman by tying off the part to be removed by means of two long narrow strips of fascia lata, like pieces of tape. These strips were first pulled directly through the substance of the liver, from behind forward, with a pair of long alligator forceps, and their respective ends tied very tightly around the hepatic substance to either side. The growth was then cut away, well within healthy liver tissue, without the slightest difficulty or bleeding, in spite of the great thickness of the hepatic stump.

Illinois Medical Journal, Chicago

May, 1919, **35**, No. 5

Corpus Luteum in its Relation to Amenorrhea, Sterility, Abortion, and Pseudo Extra-Uterine Pregnancy. E. H. Ochsner, Chicago. —p. 225.
Goiter. E. P. Sloan, Bloomington.—p. 226.
Retropharyngeal Abscess in Children: Case Reports. H. E. Irish, Chicago.—p. 327.
Final Report of Quackery Committee Appointed by Douglas Park Branch of Chicago Medical Society. H. R. Krasnow, Chicago. —p. 231.
Robert Jones Operation for Talipes Equino Varus. L. H. Zeuch, Chicago.—p. 241.
Extra-Uterine Pregnancy. F. F. Wisniewski, Chicago.—p. 246.
Clinical Aspect of Diagnosis of Diseases of Alimentary Tract. A. A. Goldsmith, Chicago.—p. 249.
*Case of Bilateral (Double) Spontaneous Pneumothorax. E. A. Gray, Chicago.—p. 252.

Case of Bilateral (Double) Spontaneous Pneumothorax.—Gray reports the case of a man, aged 32 years, a victim of pulmonary tuberculosis who had a violent coughing spell, marked by a sudden pain in the right side and followed shortly by dyspnea. The diagnosis of spontaneous pneumothorax, right, was made. Aspiration of the right chest was immediately done and 2,000 c.c. of air withdrawn; the patient promptly rallied and became comfortable. Ten hours later, it became necessary to aspirate again. The escape of air from the lung increased and it was soon found necessary to aspirate at shorter intervals. Because of extensive disease of the left, lung, the latter did not contain enough aerating tissue to sustain life. Nevertheless, to determine the point, the trocar was allowed to remain open in the chest wall on the pneumothorax side, creating, in effect, an open pneumothorax. Within a very few minutes the patient showed great distress and aspiration was done. Effusion soon appeared and this, in a short time, showed infection. The amount of fluid soon became great and required frequent aspiration. Air began to diminish in quantity. On the fourteenth day a fistula occurred in a needle track. The skin opening was fortunately trapped and, while coughing, expelled air and fluid (pus and seropus), there was no inhalation through the sinus. It was now decided to attempt to bring the lung down; to this end, continuous siphon drainage was established, with the result that, by June 18 (the twenty-third day) breath sounds were heard over the right upper lobe as far down as the third rib, and respiration became much easier and the patient was able to lie on the pneumothorax side. On the seventh day an extensive emphysema occurred and involved the chest, abdomen, scrotum, penis, neck and face. June 19 the patient complained of shortness of breath; aspiration of the right chest was done, but little relief was afforded. The trocar found the base of the lung in the fourth space. Examination of the left lung showed diminution of breath sounds. June 20 the patient was found to be much worse. While fair respiration was being performed by the right lung, the left lung presented no sounds whatever. The patient complained of some pain in the left lung, but of very little dyspnea. Aspiration of the left chest relieved the patient of 1,800 c.c. air, but did not improve the general condition. He was comfortable until his death, which occurred twenty-four hours after the second rupture.

Indiana State Medical Association Journal, Fort Wayne

May, 1919, **12**, No. 5

War Neuroses. C. D. Humes, U. S. A.—p. 123.
Medical Empiricism and Pathology of Chronic Head and Throat Infections. O. C. Breitenbach, Columbus, Ind.—p. 125.
*Club Feet. H. R. Allen, Indianapolis.—p. 130.
Bacillus Fusiformis Infection; Report of Case. S. R. Edwards, Indianapolis.—p. 132.

Treatment of Club Feet.—As to the treatment of club feet, Allen says that he would not under any conditions ever touch a bone with any kind of a surgical instrument, nor would he make a skin incision longer than one-eighth of an inch, nor use a Thomas wrench. The treatment he employs consists of surgery and proper bracing. The adduction and pes cavus are first reduced by cutting the flexor brevis and fascia, if necessary, then forcibly shred or tear all other soft tissues resisting the extreme limits of normal abduction and planus positions. The second step is to cut obliquely the tendo-achilles and then forcibly convert the equino-varus into a valgo-calcaneous position. If the surgery and manipulation have been thorough and complete, then the little finger will easily convert the adducto-cavo-varo-equinus into an extreme position of abducto-plana-valgo-calcaneus and then but little resistance will be encountered in retaining this position. The next step is the application of braces. There are two kinds of braces, and two periods for using them. The first brace is the retention brace. It is used both day and night at the beginning, being removed for bathing and massage. The period of wearing braces varies. People between 35 and 60 years wear braces for an entire year. Younger patients wear them a shorter time. The retention brace is worn day and night until the foot shows no tendency to return to its original deformity, after being absolutely unbraced for a number of hours. When this point is reached, the walking brace may be employed during the day and the retention brace used only at night. The retention brace must hold the foot and femur about parallel. The tibia and femur should be so flexed on each other that the papliteal angle thus formed is considerably less than a right angle. The brace must also secure the exact counterparts of each of the original deformities. It is also important to understand that in order to produce ultimately a normal foot with normal ranges of movement that these extreme normal ranges must be secured during the process of correction. The time necessary for operation and application of the retention brace is usually ten or twelve minutes.

Iowa State Medical Society Journal, Des Moines

May, 1919, **9**, No. 5

Pathology of Streptococcus Infection of Lungs. D. J. Glomset, Camp Dodge.—p. 143.
Fractures Complicating Ankle Joint. A. P. Stoner, Des Moines.—p. 148.
Plastic Surgery of Peripheral Nerves. J. A. Dales, Sioux City.—p. 155.
Fractures Complicating Joints of Upper Extremities. C. S. James, Centerville.

Journal of Infectious Diseases, Chicago

January, 1919, **24**, No. 1

*Antibodies in Fetus. H. W. Sherman, Chicago.—p. 1.
Characteristics of Some Bacteria on Simple Synthetic Medium. F. Hulton-Frankel, H. Barber and E. Pyle, New York.—p. 9.
Sugar Fermentations in Synthetic Mediums. F. Hulton-Frankel and H. Barber, New York.—p. 17.
Some Animal Experiments with Organisms Grown on Synthetic Medium. F. Hulton-Frankel and E. Pyle, New York.—p. 19.
*Partial Tension Streptococci and Vaccine Preparation. W. W. Oliver and O. C. Perkins, Brooklyn.—p. 22.
*Comparison of Six Different Antigens in Wassermann Reaction. E. H. Ruediger, Bismarck, N. D.—p. 31.
Transmissibility of Immunity from Mother to Offspring in Hog Cholera. C. L. McArthur, Fayetteville, Ark.—p. 45.
Resistance of Glanders Bacillus to Calcium Hypochlorite. B. Cohen, New Haven.—p. 51.
*Spirochete-Like Spiral Bodies in Bacterial Cultures. G. Koga and G. Otsubo, Tokyo.—p. 56.
*Bacterial Content of Prostate and its Relation to Prostatic Adenoma. R. Rosen, Baltimore.—p. 63.
Agglutination in Measles. R. Tunnicliff, Chicago.—p. 77.
*Simple Method for Isolation of Influenza Bacillus. E. P. Bernstein and L. Loewe, New York.—p. 78.

Antibodies in Fetus.—This paper is confined to a study of the natural antibodies of swine embryos. Included are lysins, complement and bacterial opsonins. Sherman found that in the youngest embryos complement and lysins are inappreciable. Opsonins were present but averaged only 0.04 as measured by the opsonic index. Complement and opsonins increase as the age of the fetus increases. Lysins do not appear to increase. In the amniotic fluids complement is only occasionally found; lysins and opsonins resemble closely those of the fetal serums. The conclusions of Polano and Goldmann from their work, respectively, on antitoxins and vital stains, that the amnion has a selective secretory action, seems to be unwarranted. The theory of the transudation of the amniotic fluid from the maternal serum is untenable. The amniotic fluid is probably derived almost exclusively under normal conditions as a transudation from the cord and as a secretion from the surface of the fetus. In the allantoic fluids complement was found only in the younger embryos. Lysins are found more prevalent in the earlier fluids but to a small extent also in the later.

Vaccines of Partial Tension Streptococci.—From a series of thirty-two cases of rather diverse nature partial tension streptococci were isolated by Oliver and Perkins. In one case each of asthma, pyorrhea, chorea, uterine infection and two cases of "cold abscess" growth was obtained only at partial tension. In one of the cases of "cold abscess" isolation of a very minute streptococcus was effected only by growth in an atmosphere of diminished oxygen from which the respiratory carbon dioxid was removed. In the remaining twenty-six cases, the relative luxuriance of growth at partial tension was in contrast to the meager growth obtained aerobically and, in certain cases, anaerobically. By the use of the partial tension method sufficient growth was obtained usually within twenty-four hours and never later than forty-eight hours, to allow of the preparation of an autogenous vaccine. In none of the seventeen cases in which vaccines were prepared was sufficient growth obtained aerobically or anaerobically within forty-eight hours to warrant the preparation of a vaccine.

Antigens in Wassermann Reaction.—The antigens studied by Ruediger were alcoholic extract of human heart muscle; alcoholic extract of syphilitic fetal liver; alcoholic extract of dog heart muscle; acetone insoluble antigen of dog heart muscle; alcoholic extract of sheep heart muscle and acetone insoluble antigen of sheep heart muscle. He found that antigen diluted with the salt solution slowly so as to give an opalescent solution gave many more positive results with the Wassermann test than did antigen which was diluted rapidly enough to give a clear solution. Adding the antigen to the human serum before the complement gave results identical with those obtained when the complement was added before the antigen. Antigen supposed to be alcoholic extract of syphilitic fetal liver and antigen prepared from dog heart gave many more positive results than did alcoholic extract of human heart. As no other signs or symptoms of syphilis could be detected these were considered false positive results, and these antigens were discarded as being unreliable. Antigen prepared from sheep heart gave results almost identical with those given by antigen prepared from human heart. Ruediger is convinced that the glycerol added to the human serum cannot be held responsible for the false positive results obtained. Previous absorption of the natural antidog amboceptor from the human serums did not eliminate the false positive results.

Spiral Bodies in Bacterial Cultures.—Spiral bodies resembling spirochetes were found by Koga and Otsubo in anaerobic cultures of various bacteria cultivated in the plasma-ascites medium, Noguchi's ascites-agar and Shimamine's horse serum medium. They conclude that the spiral bodies are nothing more than an unusual development of the flagella or parts of the bacterial bodies. The spiral bodies seem to be identical with Noguchi's involuted forms of Treponema macrodentium. It is suggested by the authors that it is necessary to pay special attention to motility, stainability and the pure cultivation in any study of spirochetes, when associated with other bacteria. Morphology alone is not in these cases reliable. It is further suggested that this method may be applied in the search for flagella. They have discovered the presence of flagella in B. mallei, which had been considered to have no flagellum.

Bacteria of Prostate and Adenoma.—From a series of thirty-nine cases organisms have been isolated by Rosen. The colon group of organisms was the commonest found; no one organism was found specific to the gland; not once was the gonococcus isolated. The history of the cases in this series shows that persons with a negative record as to gonococcus infection to be as susceptible to prostatic hypertrophy as those with infection. Rosen is convinced that the significance of the bacteria isolated from the prostate gland and the rôle that they may play in prostatic hypertrophy, if any (other than that they may be secondary invaders), cannot be determined from this investigation.

Isolation of Influenza Bacillus.—By the employment of gentian violet blood agar Bernstein and Loewe found the isolation of the influenza bacillus to be comparatively easy. The use of this medium gives a much higher percentage of positive results than plain blood agar. Agar was prepared with a H ion of 7.1 and a gentian-violet content of 1 : 5,000—taking a concentrated alcoholic solution of the dye as unity.

Journal of Pharmacology and Experimental Therapeutics, Baltimore

January, 1919, **12**, No. 6

Dichlorethylsulphid ("Mustard Gas"). I. Influence of Solvents, Adsorbents and Chemical Antidotes on Severity of Human Skin Lesions. T. Sollmann, Cleveland.—p. 303.
Id. II. Question of Induced Hypersusceptibility of Skin. T. Sollmann, Cleveland.—p. 319.
*Effect of Cocain Hydrochlorid on CO_2 Production of Mixed Nerve Fiber. S. Niwa, Chicago.—p. 323.

March, 1919, **12**, No. 8

Apparatus for Administration of Gases and Vapors to Animals. E. K. Marshall, Jr., and A. C. Kolls, Washington.—p. 385.
Dichlorethylsulphid (Mustard Gas) III; Solubility and Hydrolysis; New Method for Estimating Small Amounts. E. F. Hopkins, Washington.—p. 393.
Studies in Elimination of Certain Digitalis Bodies from Animal Organism. R. A. Hatcher and C. Eggleston, New York.—p. 405.

Effect of Cocain Hydrochlorid on CO_2 Production.—The results of Niwa's experiments support the statement that the local anesthetics, cocain hydrochlorid, affects the metabolism of the mixed nerve in exactly the same manner as do general anesthetics, namely, primary stimulation by a weaker concentration, and subsequent diminution of the CO_2 production by a higher concentration. These facts demonstrate that there is a close relationship between the rate of nerve metabolism and the state of excitability of the nerve, and suggest that anesthesia in general is probably brought about by interference with the tissue metabolism.

April, 1919, **13**, No. 1

*Dichlorethylsulphid (Mustard Gas) IV. Mechanism of Absorption by Skin. H. W. Smith, G. H. A. Clowes, and E. K. Marshall, Jr., Washington, D. C.—p. 1.
*Action of Local Anesthetics on Striated Muscle. S. Kubota and D. I. Macht, Baltimore.—p. 31.
Adenine Mononucleotide. W. Jones, and R. P. Kennedy, Baltimore.—p. 45.
Drug Action as Modified by Disease Toxins I. Oyabain Vs. Diphtheria Toxin. A. D. Bush, University of Missouri.—p. 55.
*Action of Viburnum Prunifolium. B. H. Hager and F. C. Becht, Chicago.—p. 61.

Mechanism of Absorption of Mustard Gas by Skin.—The experimental data obtained by Smith et al. indicate that mustard gas is first adsorbed by some element on or immediately adjacent to the skin surface. While a portion of the mustard passes rapidly inward to a point from which it cannot subsequently be removed, the greater portion remains on or near the surface for a considerable period, a proof of which is that it may be removed even after ten or fifteen minutes by persistent washing with organic solvents. The amount of mustard passing into the atmosphere from an exposed surface far exceeds the amount passing into the inner strata of the skin. This loss is very great at first and is still demonstrable after forty-five minutes. The time of exposure necessary to produce a positive reaction bears a definite relation to concentration and varies for different individuals. A resistant skin adsorbs far more gas than a sensitive skin, and gas may be withdrawn from the latter by the former. The difference in sensitivity of different skins is due principally to difference in saturation adsorptive capacity. The intracellular threshold concentration of gas required to produce pathologic changes in the skin is approximately the same in resistant and sensitive individauls.

Action of Local Anesthetics on Striated Muscle.—The action of a large number of local anesthetics on excised skeletal muscles of the frog and the rat was studied by Kubota and Macht. It was found that all of the substances studied depressed the excitability and the contractility of striated muscle and caused a quicker onset of fatigue. No primary stimulating effect was noted after the exhibition of even very small doses of cocain or local anesthetics. Of the decomposition products of cocain, ecgonin was found to be a powerful depressant, while benzoyal ecognin was only very slightly depressant in its action, and sodium benzoate and methyl alcohol produced practically no effect. The stimulating effect of cocain on muscular work, therefore, cannot be due to its peripheral action on the muscles themselves, but must be ascribed to a central action.

Action of Viburnum Prunifolium.—None of the preparations of viburnum prunifolium, which Hager and Becht tested markedly affected uterine movements, in either a positive or negative direction. Therefore, they believe that the assertion is borne out by their experiments that as compared with pilocarpin and pituitary extract preparations of viburnum prunifolium must be considered an indifferent drug with no specific action on the uterus. They are convinced that no uniform pharmacologic effect can be ascribed to the drug, for while a stimulation may seem evident at one time, a similar dose under the same conditions produces an apparent inhibition or no perceptible change whatever. The change in the contractions of the uterus which sometimes occur on the addition of an extract of the viburnum prunifolium bark are so slight that the changes may be explained as having been produced reflexly through manipulation of the animal during injection or by the alcohol which holds the drug in solution.

Kansas Medical Society Journal, Topeka

May, 1919, **19**, No. 5

District Board Work from Doctor's Standpoint. J. T. Axtell, Newton.—p. 103.
Work of Red Cross Organizations in Relation to Preventive Medicine of Future. A. Newsholme, England.—p. 107.

Medical Record, New York

May 24, 1919, **95**, No. 21

Case of Osteitis Deformans. A. W. Ferris, Watkins, N. Y.—p. 853.
Training for Lay Workers in Functional Restoration. E. A. Bott, Toronto.—p. 856.

Medical and Legal Aspects of Automobile Plague in Washington. R. W. Shufeldt, Washington.—p. 858.
Rehabilitation of Disabled Soldier. J. C. Faries, New York.—p. 861.
Salient Duties of Nurse. S. E. Earp, Indianapolis.—p. 862.
War Activities of U. S. Public Health Service. B. S. Warren and C. F. Bolduan, Washington.—p. 863.

New York Medical Journal

May 24, 1919, **109**, No. 21

Training of Personnel of An Evacuation Hospital for Service at the Front. E. Eliot, Jr., New York.—p. 881.
*Experiments Conducted to Produce Human Tuberculosis in Fish (Carassius Auratus). R. C. Rosenberger, Philadelphia.—p. 886.
Perforated Zinc Inhaler in Treatment of Respiratory Affections. B. Robinson, New York.—p. 887.
Danger of Pestilence in Europe and Need of an International Health Commission. G. A. Soper, New York.—p. 888.
Memory As An Aid to Vision. W. H. Bates, New York.—p. 890.
*Epidemic Central or Basilar Encephalitis. B. Sachs, New York.—p. 894.
Bone Transplantation; Ideal Method for Correction of Saddle Back Nose. W. W. Carter, New York.—p. 899.
Relation of Urinary Acidity to Specific Gravity. A. L. Benedict, Buffalo.—p. 902.
Experience of a Urologist with Fighting Forces in France. E. Beer, New York.—p. 903.
Administration of Urological Department, A. E. F. E. L. Keyes, Jr., New York.—p. 904.

Experiments to Produce Human Tuberculosis in Fish.—For a period of over three years, Rosenberger conducted experiments trying to determine if tuberculosis could be produced in fish with the human tubercle bacillus by raising the temperature of the water to or near the body temperature of man. In certain parts of the world the eating of raw fish is quite common, and it occurred to Rosenberger that this might be one of the means of the dissemination of the disease. During the entire period of experimentation in all of the spreads studied both from the sediment of the water and the feces of the fish, tubercle bacilli were always demonstrable, although in gradually decreasing numbers. It would seem that the time (three years), mostly at ordinary room temperature, and for several months from 30 to 33 C., was sufficient for infection to have taken place in these fish, and in not one fish was the least suggestion of a tubercle found, except a seemingly increased number of small round cells in the submucosa of the intestinal canal. Rosenberger made histologic studies of a number of control fish of the same variety as those experimented on, and in all of them great numbers of small round cells were observed in the submucosa of the intestines.

Epidemic Central or Basilar Encephalitis.—Of fourteen cases of this disease seen by Sachs, five proved fatal. All of these were bulbar cases. Some patients with bulbar symptoms are on the way to recovery. The cases are cited in detail.

Oklahoma State Medical Assn. Journal, Muskogee

April, 1919, **12**, No. 4

Infant Mortality. R. M. Anderson, Shawnee.—p. 87.
Manifestations of Syphilis in Pregnancy and New Born. W. W. Wells, Oklahoma City.—p. 93.
Practical Thoughts on Care of Pregnant Woman. M. Bledsoe, Chickasha.—p. 95.
Acute Fractures of Skull. A. R. Wiley, Tulsa.—p. 97.

Pennsylvania Medical Journal, Athens

February, 1919, **22**, No. 5

The "Chronic" Tonsil. N. S. Weinberger, Sayre.—p. 261.
Tonsillectomy under Local Anesthesia. G. B. Jobson, Franklin.—p. 266.
Bone Regeneration Following Osteomyelitis. S. L. McCurdy, Pittsburgh.—p. 270.
Follow-Up System of Pennsylvania Department of Health for Former Tuberculous Patients. K. Schaffle, Camp Hill.—p. 276.
Full-Time Staff in Organization of Small Hospital. H. L. Foss, Danville.—p. 285.
Essential Hypertension. H. O. Mosenthal, New York City.—p. 287.
Some Drug Eruptions. M. B. Hartzell, Philadelphia.—p. 292.
Blood Pressure as Prognostic Factor. R. M. Goepp, Philadelphia.—p. 295.
Prognosis of Cases of Intestinal Perforation in Typhoid Without Operation. C. W. Eisenhower, York.—p. 301.
Thoracic Surgery. G. P. Muller, Philadelphia.—p. 304.
Treatment of Malignant Disease by Combined Methods. (Surgery and Roentgen Rays). G. E. Pfahler, Philadelphia.—p. 307.
Investigation of Alleged Epidemic of "Psittacosis" in Wilkes-Barre, Pa., March, 1917. T. W. Jackson, H. L. Hull and J. B. Rucker, Harrisburg.—p. 312

May, 1919, **22**, No. 8

Responsibility of State Toward Problem of Physical Reconstruction and Industrial Rehabilitation of War and Industrial Cripples.—H. A. Mackey, Harrisburg.—p. 473.
Responsibility of Industries Toward Problem of Physical Reconstruction and Industrial Rehabilitation of War and Industrial Cripples. C. B. Auel, East Pittsburgh.—p. 477.
Mechanical Aids to Reconstruction. R. T. McKenzie, Philadelphia.—p. 483.
Prevention of Industrial Diseases and Reclamation of Diseased. A. Stengel, Philadelphia.—p. 485.
Industrial Injuries in New Jersey. L. T. Bryant, Trenton.—p. 489.
Work of Federal Board for Vocational Education. H. L. Brunson, Wishington, D. C.—p. 490.
Reclamation of Disabled. H. E. Mock, Washington, D. C.—p. 492.
Returning Disabled to Economic Independence. D. C. McMurtrie. New York.—p. 495.
*Recent Results of Coordination of Laboratory and Clinical Researches in Pneumonia. S. S. Cohen, Philadelphia.—p. 506.

Recent Results of Coordination of Laboratory and Clinical Researches in Pneumonia.—This paper is a review of other papers published since 1917 by this author and others which were abstracted in The Journal.

Public Health Journal, Toronto

May, 1919, **10**, No. 5

Medical and Social Aspects of Venereal Disease Problem. G. Bates.—p. 193.
Tuberculosis Findings in City Survey. D. B. Armstrong, Framingham, Mass.—p. 205.

Virginia Medical Monthly, Richmond

May, 1919, **46**, No. 2

*Congenital Pyloric Stenosis Comparison of Operative Procedures. W. L. Peple, Richmond.—p. 25.
Present Status of Cesarean Section. B. H. Gray, Richmond.—p. 29.
Immediate Perineal Repair. V. Harrison, Richmond.—p. 33.
Diet During Puerperium. M. P. Rucker, Richmond.—p. 35
Case of Gangrenous Balanitis. C. F. Ross, Richmond.—p. 36.
Treatment of Fractures of Elbow. P. W. Boyd, Jr., Winchester.—p. 37.
Causes of Insanity. J. T. A. Wright, Woodville, Pa., and G. A. McCracken, Pittsburgh.—p. 39.
Cooperative Medicine. H. H. Roberts, White Sulphur Springs, W. Va.—p. 40.
Treatment of Non-Malignant Laryngeal Vegetations by Roentgen Rays. A. I. Gray, Richmond.—p. 41.

Congenital Pyloric Stenosis.—Peple has devised a special table for operating on babies. It is made of wood and is twenty-eight inches long, ten inches wide, and eight inches high. It contains a drawer which can be filled with hot water bags to supply and maintain heat without any danger of burning. It has a headpiece that drops back at any desired angle, and a screen to keep the anesthetist well out of the way. It is fastened, by bandages passing through its lower rim, to any operating-table, making it perfectly steady and allowing it to follow the big table in Trendelenburg or any other desired position. Slots and holes are cut in its upper surface, so that the hands and thighs may be securely fastened. These also allow the heat from below to come up under the covers to maintain an even temperature. The height of the table raises the surface of the abdomen about as high as the adult's would be. Special little blankets are used to wrap the chest and legs, and little covers and sheets are made to suit the baby; with a special set of little instruments, needles and sutures, everything is brought into proper proportion.

West Virginia Medical Journal, Huntington

March, 1919, **13**, No. 9

Treatment of Infected Gall-Bladder and Bile Duct. C. R. Ogden, Clarksburg.—p. 321.
Intestinal Tumors. R. J. Reed, Wheeling.—p. 324.
Pellagra; Report of Cases. H. G. Steele, Bluefield.—p. 329.
Pellagra. E. F. Moore, Davis.—p 334
Puerperal Gangrene of Both Legs, Extending to Knees; Double Amputation; Recovery C. F. Hicks, Welch.—p. 337.

May, 1919, **13**, No. 11

Operative Treatment of Fractures. C. F. Hicks, Welch.—p. 401.
Baneful Influence of Uterine Retrodisplacements on Procreative Function of Ovaries. R. J. Reed, Wheeling.—p. 405.
Typhoid Epidemic in Coal Fields V. L. Wetherby, Wilcoe.—p. 4[illegible]

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Indian Medical Gazette, Calcutta

April, 1919, 54, No. 4

Exercises on Ground Without Troops and Uses to Senior Medical Officers. P. Hehir.—p. 121.
Search for Schistosomiasis in India. F. Milton.—p. 126.
*Treatment of Lepers with Gynecardate of Soda "A." E. Muir.—p. 130.
*Bacteriology of "Spanish Influenza." C. A. Woutersz.—p. 134.
*Simple Operation for Piles. T. H. Foulkes.—p. 137.
Results of Microscopic Examination of Stools of Five Hundred East African Natives Not Suffering from Intestinal Diseases. T. A. Hughes.—p. 139.
*Unusual Case of Hydrophobia. J. W. Cornwall.—p. 140.

Treatment of Lepers with Gynecardate of Soda "A".—Muir reports on the condition of thirty patients whose cases were recorded previously and cites twenty-three new cases in which he used gynecardate of soda "A". As sodium gynecardate "A" led to destruction of the veins in several cases it was found necessary to give sodium morrhuate intramuscularly. There was not such rapid progress made in the clearing up of anesthetic patches with the morrhuate, but the nodular patches made equally rapid progress. In some cases, over-dosage led to a very marked febrile reaction, accompanied by the formation of pustules and, later, of sores on the limbs and a recrudescence of anesthesia. This sudden return of anesthesia was in cases that had made specially rapid progress before. The rapid progress made at first in several cases was followed later by slower, but still steady, progress towards recovery. Early cases healed up rapidly, especially in children with intravenous injections of sodium gynecardate "A" solution. Sodium morrhuate is not nearly so destructive to the veins. To get the maximum of effect Muir recommends the following system of dosage: First week.—Sodium gynecardate "A" .5 c.c. intravenously, first day; sodium gynecardate "A" .25 c.c. plus sodium morrhuate .25 c.c. intravenously, third day; sodium morrhuate .5 c.c. intramuscularly, fifth day. Second week.—Sodium gynecardate "A" 1 c.c. intravenously, first day; sodium gynecardate "A" .5 c.c. plus sodium morrhuate .5 c.c. intravenously, third day; sodium morrhuate 1 c.c. intramuscularly, fifth day. In this way the dosage should be increased by .5 c.c. week by week up to 5 c.c., provided there be no marked febrile reaction or other danger signal. Where there is a marked febrile reaction the dose should be halved and again gradually raised, but kept at least 1 c.c. below the dose that produced the marked reaction. The injections should be continued for some months after symptoms have entirely disappeared.

Bacteriology of "Spanish Influenza."—In fifteen typical cases of epidemic influenza examined by Woutersz an organism was discovered which has not been described as yet. Of the fifteen patients seven recovered in from four to eight days; the remaining eight patients developed pneumonia very early in the illness and died in from three to five days. Of the seven patients who recovered, the sputa of six were examined at the height of the illness; in the seventh case the sputum was not examined till the eleventh day after recovery. In all these cases the sputum was found to be teeming with moderate sized, plague-like bacilli. After a month's convalescence the organisms were not found in the sputum. Similar organisms to those found in the sputum were present in the heart-blood, spleen, lungs, and kidneys of the fatal cases. Smears stained with dilute (1 in 10) carbolfuchsin showed a large number of bacilli not unlike *B. pestis*, but perhaps a little more regular in shape and more pointed. Pfeiffer's *B. influenzae* could not be identified in the smears from sputum or the post-mortem material. Cultures made on serum agar, blood agar, and haemoglobin (Deschien's) agar failed to give a growth of Pfeiffer's bacillus. On the other hand, the plague-like organism was always present in cultures. The organism is a rather short bacillus with a tendency to polar staining; a very noticeable character is its pleomorphism, especially when grown in liquid media, although direct preparations from the tissues also show it. Cultures on agar-agar show short, coccoid forms, and at times the organism looks very like a diplococcus. Longer forms are met with in broth cultures. Diplobacilli are very common. Smears from heart-blood show a well-defined capsule, but it is not as a rule met with in smears from the spleen and other organs. The capsule tends to disappear on cultivation in solid media, though milk cultures almost always show it. No flagella or spores were demonstrated. True motility was not observed. The organism is gram-negative, and stains very readily with all the usual laboratory stains. It is acid-fast. The organism grows aerobically but it is also a facultative anaerobe. The organism isolated freshly from the human body is highly pathogenic for rabbits, guinea-pigs, and rats. Grown for several generations on artificial media, however, it rapidly loses its virulence.

Operation for Piles.—The operation described by Foulkes is really that called "Robert Jones's," by Burghard, varied by the use of a modification of the interlocking ligature previously described by the author in 1912.

Unusual Case of Hydrophobia.—A male, aged 25, was bitten on the right thigh, three punctures, about October 5, 1918, by his own dog, which had been bitten by a stray dog about a month before. A cow, an ass, a dog, and the man's wife were bitten the same day as he was bitten. Of these, the dog was killed within a few days, the wife died from hydrophobia about a month and a half after having been bitten, and the cow and the ass died a few days later. The patient's wounds healed. He continued his occupation until the morning of February 4, 1919, about four months after his bite, when he felt a difficulty in swallowing and in breathing. He died on the twelfth, nearly nine days later, which Cornwall points out is an unusually long time for the disease to last.

Japan Medical World, Tokyo

April 27, 1919

Toxin Produced by Influenza Bacillus. S. Yabe. To be continued.

Journal of Laryngology, Rhinology, and Otology, London

May, 1919, 34, No. 5

Intrinsic Cancer of Larynx; Operation by Laryngofissure and Results. S. C. Thomson.—p. 145.
Laryngeal Changes Induced by Mustard Gas. A. Ryland.—p. 153.

Journal of Tropical Medicine and Hygiene, London

April 15, 1919, 22, No. 8

*Amebic Abscess of Brain: Following Amebic Abscess of Liver. F. L. Armitage.—p. 69.

Amebic Abscess of Brain Following Amebic Abscess of Liver.—Dysenteric abscess of the brain supervene, as a general rule during or following a liver abscess, and the condition is found most commonly in those regions where amebic dysentery is endemic. Forty-eight cases are recorded to date. The amebas are carried from the liver by the circulation via the circle of Willis to the brain, where successive lesions are evolved in the cerebral tissue. The case seen by Armitage is one recorded by Stout and Fenwick. The patient, aged 35, was admitted to the hospital, with a diagnosis of "gallstones," and a history of frequent rigors, jaundice, pain in the region of the gallbladder and evening rise of temperature to 103 F. There a diagnosis of hepatic abscess was made. The patient was operated on, and an abscess evacuated. The liver abscess pus showed many actively motile *Endamebae histolyticae*. About six weeks afterward mental symptoms were noted, such as drowsiness and listlessness. There was no pain, and on the whole he slept fairly well, but was frequently disturbed by a troublesome cough. The pulse varied from day to day, being fairly good at times, at others becoming very weak, and he was put on strychnin and pituitary extract. The urine and feces continued to be passed involuntarily, and remained so throughout the rest of his illness. His mental condition improved somewhat, he spoke rationally, and was usually cheerful and bright. A troublesome hiccup developed during the last three days of his illness, and on the day prior to his death he complained of occasional headache, which apparently, however, was not severe. The temperature during the last fortnight was usually about 101 F., the highest being 102 F. There were no rigors and no ocular or localizing symptoms indicating brain abscess. The patient died fifteen days after the onset of cerebral symptoms. At the necropsy an abscess of size of pigeon's egg was found in the lower inner portion of the right frontal lobe extending into right ventricle, and containing thin yellow pus. There was an area of softening in the brain around and localized basal meningitis in that area. Motile endamebas were found in the softened tissue surrounding the pus proper.

Archives Médicales Belges, Liége

January, 1919, **73**, No. 1

Influenza in the Belgian Army. Nolf, Spehl, Colard and Firket.—p. 1.
*Lethargic Encephalitis. H. Burger and R. Focquet.—p. 19.
*The Argyll Robertson Sign in Prognosis. E. Rasquin and B. Dujardin.—p. 26.
War Mental Disturbances. A. Leroy.—p. 40.

Lethargic Encephalitis.—Burger and Focquet declare that to date the clinical picture known as lethargic encephalitis is confused, the causal agent unknown, and the pathologic anatomic basis not well defined. It was first described in Paris and England in March, 1918, but epidemics had been recorded at Tübingen in 1712, in Italy in 1890, and at Vienna in 1917. The death rate is about 33 per cent. They describe a case in the maréchal des logis, who was found unconscious on the street, apparently in the deep slumber of drunkenness. He slept calmly the next day till he roused and complained of severe headache in the right temple, and ptosis of the right eyelid and divergent strabismus were also noted. He soon dropped to sleep again. Jacksonian epilepsy developed in the course of the disease, which proved fatal the thirteenth day. Lumbar puncture showed a hemorrhagic process but no bacteria could be cultivated from the fluid.

The Argyll Robertson Sign.—Rasquin and Dujardin assert that the discovery of the Argyll Robertson sign calls at once for making out the balance sheet as regards syphilis. It may be the only sign of the disease and the patient may not be aware that he has it and may feel perfectly well. Nevertheless he must be told of the danger in which he stands, and the urgent necessity for treatment must be impressed on him as the only chance for him to escape some severe nervous affection, general paralysis, for example. The balance sheet can be drawn with great precision nowadays by the data obtained from examination of the blood, spinal fluid and the reaction to luetin. We can thus form a kind of biologic formula which can be compared with the typical formulas of the principal syphilitic nervous affections, and thus foretells the outcome. If the Bordet-Wassermann test of the blood is negative, reactivation must be tried. 'If this is negative, then lumbar puncture must be done, and only when all of these give a negative response are we justified in keeping the patient merely under surveillance. When the findings in the spinal fluid are seen to be exactly like those with grave nervous affections, the patient becomes convinced of the desirability of treatment. These old forms of syphilis are often very slow in responding to treatment, even quite active. As the reactions return to normal under treatment, the patient will understand better and will submit more docilely to our therapeutic efforts. By comparing the biologic formulas from time to time we can supervise conditions as they improve and further convince the patient of the wisdom of thorough treatment.

Bulletin de l'Académie de Médecine, Paris

March 25, 1919, **81**, No. 12

Possibility of Protozoan Origin of Cancer. A. Lumière.—p. 326.
Cancer at Havre. A. Loir and Legangneux.—p. 357.
Vaccination Against Smallpox in French Army. Fasquelle.—p. 359.
See Paris Letter, p. 1384.

Journal de Chirurgie, Paris

April, 1919, **15**, No. 2

Wounds of Large Vessels at Base of Neck. L. Sencert.—p. 101.
*Surgical Complications of Typhus. P. Moure and E. Sorrel.—p. 136.

Surgical Complications of Typhus.—Moure and Sorrel were at the French hospital at Jassy during the 1917 epidemic of typhus and of relapsing fever in Roumania. They were impressed by the frequency, after typhus, of nose, mouth and throat complications, of parotitis, of laryngeal and ocular complication, erysipelas and gangrene. In two soldiers, acute delirium with attempt at suicide, was almost the first symptom of the disease. The streptococcus was generally responsible for the complications which were usually subacute. The prognosis is generally grave as the patients are at such a low ebb of vitality. Prophylaxis must aim to ward off secondary infection, and general strengthening treatment is more important than local measures.

Journal de Médecine de Bordeaux

April 25, 1919, **90**, No. 8

*Indemnization for Hysteric Accidents. R. Cruchet.—p. 147.
*Oxygen for Burns from Gassing. E. Rousseau and L. Devaux.—p. 149.

Pension for Hysteric Disability.—Cruchet recalls that in 1916 the Société de Neurologie voted that phenomena of hysteria, pure pithiatism, do not entitle a soldier to a special disability pension. This dictum was voted notwithstanding Pitres' objections, but time has confirmed these objections, and the society has had to capitulate. March 20, 1919, the society went on record as advocating discharge from the army and a special disability indemnity for this class of cases. The hysteric are diseased, and the examiner has only to determine the amount of real disability resulting. Pitres related that in the 503 cases at Bordeaux there was not a single instance of hospital contagion. He insisted that these cases should be regarded from the same standpoint as industrial accidents. The indemnity finally voted by the society was a sliding scale from zero to 20 per cent.

Treatment of Mustard Gas Burns.—Rousseau and Devaux had a lot of raw meat that had been exposed to mustard gas sent to their laboratory, and their tests on this material showed that nascent oxygen annulled the irritating properties of mustard gas, the "yperitis." Copious application of hydrogen dioxid proved effectual in treatment of gassed soldiers, suppressing the intense pain constantly and completely in less than ten hours, the pain subsiding by half in less than an hour, and the edema disappearing in less than six days and showing marked improvement in a few hours. Fats hold the mustard gas and form a barrier to the action of the nascent oxygen, hence salves should not be used.

Lyon Médical

April, 1919, **123**, No. 4

*Tuberculosis of Tracheobronchial Glands. A. Dumas.—p. 180.
*Nervous Complications of Influenza. C. Maurice.—p. 187.

Fulminating Tuberculosis of Tracheobronchial Glands.—Dumas describes five typical cases of this unusual form of tuberculosis as he observed it in five African soldiers at Salonica. The men entered the hospital with the diagnosis of bronchitis and died in two or three months, necropsy showing tuberculous involvement of the mediastinal lymphatic system with secondary invasion of pleura and pericardium. Some of the glands broke down into a purulent focus while the lungs escaped almost entirely. The cases all proved rapidly fatal, none lasting for over three months. "Radioscopy differentiates the disease but the temperature determines the prognosis." The clinical picture is more like those observed in children than in adults, but even in children such a fulminating form is almost unknown, while it seems to be the rule in the blacks of the French colonies in Africa.

Nervous Complications of Influenza.—Maurice reviews the indications for treatment during convalescence for influenza, saying that this disease strikes electively the great sympathetic and the glands with an internal secretion which stimulate this nerve, that is, the thyroid and suprarenals. The nervous complications of influenza are thus traceable to the sympathetic nerve, as he explains in detail. Arsenic and strychnin combat this, but quinin is not indicated, as this, he says, is a *réducteur thyroïdien*. Calcium chlorid, about 2 gm. daily, will have a favorable action when the arsenic and strychnin have produced their *tonic* effect on nutrition and circulation. The calcium chlorid should be kept up for several weeks, combining epinephrin with it, about fifteen drops a day. Alcohol and the juice of raw meat should be avoided at first, while the thyrosympathetic asthenia is marked. Starchy foods, purées and cooked fruits reënforce the strychnin-arsenic medication with a tonic and remineralizing action. But later, wines and raw meats will aid in improving the state of the blood and the secretory activity of the glands. Phosphorus, eggs and milk he denounces as reducing thyroid functioning and the blood pressure. They will increase the *embarras gastrique,* he says, and benefit only in cases of a tendency to melancholia when there is a constitutionally high pressure. A change to the country, out of door life and peace of mind are the sovereign remedies for vegetative asthenia, and they should be imperatively ordered if other measures fail.

Paris Médical

April 26, 1919, **9,** No. 17

The Teaching of Hydrology. G. Linossier.—p. 325.
*Treatment of Acute and Chronic Anaphylactic Disturbances. J. Danysz.—p. 329.
*Cancer of Rectum. R. Savignac.—p. 334.

Anaphylactic Skin, Gastro-Intestinal and Nervous Disturbances.—Danysz remarks that bacteriologists and clinicians are still at variance as to whether immunity and anaphylaxis are the result of reactions of a different or similar nature. He here reports some recent experiments and clinical experiences which throw more light on the nature and consequences of these reactions, and their bearing on certain digestive, cutaneous and nervous disturbances. The difference between the reaction to repeated injection of a toxin (anaphylaxis); and the reaction to repeated injection of any other antigen (immunity), is due he explains, to whether the mixture of toxin and antitoxin forms a precipitate or persists clear. If there is a precipitate and if the antigen was a virulent microbe, the reaction will be manifested both by immunity and by anaphylaxis; by anaphylaxis alone if the antigen is an albuminoid food substance. If no precipitate forms, the reaction will be manifested by antitoxic immunity without any phenomena of anaphylaxis.

He explains further that the production of antibodies in excess of what is needed is liable not only to fatigue the cells, but the continuous production of an excessive amount of antibodies may induce various chronic morbid conditions, digestive or respiratory disturbances, dermatoses, "rheumatism," etc. These various disturbances can be arrested only by checking the excessive production of antibodies which is keeping up a chronic anaphylaxis. This can be accomplished by the same means which abort an attack of acute anaphylaxis, namely, by Besredka's method of a preliminary injection of a minute dose of the antigen which in a larger dose would unleash the anaphylactic crisis. The same result can be realized by ingestion of a strong dose of alcohol or ether (Roux and Besredka); by ingestion of a small amount of peptone (Pagniez and Vallery-Radot); or by injection of a vasoconstricting drug (epinephrin, Milian). These reactions are not specific, but they answer the purpose, and the symptoms of chronic anaphylaxis can be cured by the same mechanism of injection or ingestion of nonspecific antigens.

In practical application of this principle, Danysz has treated 159 patients, including 103 with various gastro-intestinal disturbances, 2 with persisting neurasthenic insomnia, 9 with painful menstruation, 8 with asthma, 15 with psoriasis, 10 with other dermatoses and 12 epileptics. The antigen used in treatment was an emulsion made from the bacteria in the patient's stool or a similar hetero-emulsion. The intestinal flora in the pathologic cases always included bacilli that fermented saccharose and lactose, bacteria liquefying gelatin, and certain varieties of streptococci, diplococci and enterococci, so that Danysz recognized a uniform flora, as it were, and he found that the heteropreparations were usually as efficient as those of autogenous origin. Only in the cases of painful menstruation some patients proved refractory to the hetero-antigen but yielded at once to the auto-antigen. The benefit in epilepsy was always pronounced. One boy of 9 who had been having several seizures a day has had no return of them during the eight months to date. The doses were always small, never over 3 mg. in a beverage; for subcutaneous injection, a few hundredths of a milligram of dried microbe bodies of a constant weight.

He cultivates separately each of the microbes which grow on slanting gelose, and mixes the emulsions in the proportions in which they occur in the stool, sterilizes at 60 C. or boils up two or three times if there are spores. In the majority of cases the benefit was manifest from the very first, the patient saying, "I felt something like a chill all over, and then I felt very much better at once."

Palpation of the Rectum.—Savignac in extra large type urges to make a digital examination of the rectum in every case of hemorrhoids, even suspected, of pain in rectum or anus, and of diarrhea or constipation. This is the only and almost the infallible means to reveal cancer of the rectum, and possibly in its incipiency.

Presse Médicale, Paris

April 24, 1919, **27,** No. 23

*Bone Grafts to Repair Gaps in Bones. P. Mauclaire.—p. 213.
*Leukocytosis in Infections. G. Audain.—p. 216.
Experimental Research on Hemorrhage. L. Binet.—p. 217.

Bone Grafts.—Mauclaire warns that a bone grafting operation should not be attempted until at least six months after the healing of a suppurating lesion. He found a small latent focus of osteitis in one case four months after apparently complete healing. The various technics that have been applied are reviewed and compared, and the results. In 128 cases of segmental grafts, complete success was realized in seventy-two. In his own twenty-four cases he has had eight successes, and explains that extraneous circumstances were responsible for some of the failures. If the graft is well nourished, it usually increases in size and the functional result is perfect. He prefers to introduce loosely the pointed ends of the graft into the marrow cavity of the long bone.

Leukocytosis in Infections.—Audain explains that when the infection is in an organ or tissue abounding in lymphoid elements, the mononuclear white cells are the pivot of the defense. With an organ or tissue poor in lymphoid elements (like the cellular tissue, lung or blood), the polynuclear is captain of the defensive forces. The difference between the number of polynuclears or mononuclears and the normal figure is an index of the conditions which determine the prognosis. Thousands of examinations of blood specimens have confirmed the reliability of this *résultante,* as Audain calls it. For example, assuming as normal figures, 4,900 polynuclear and 2,100 mononuclears (that is, in 7,000 leukocytes, 70 per cent. are polynuclears and 30 per cent. mononuclears), if the blood with 12,000 leukocytes shows 78 per cent. polynuclears to 22 per cent. mononuclears, then the polynuclear *résultante* would be $(780 \times 12) - 4{,}900 = 4{,}460$. The mononuclear *résultante* would be $(220 \times 12) - 2{,}100 = 540$. With infection in organs scant in lymphoid elements, the prognosis is good with a *résultante* of 3,000 to 8,000, and very good from 10,000 to 16,000 and above. With infection in an organ or tissue rich in lymphoid elements (as in enteritis, typhoid, paratyphoid and tonsillitis), the prognosis is favorable if the *résultante* is above zero. Below minus 600 it is grave, and very grave at minus 2,000 or below.

Audain insists further that the minimal temperature is what counts. The minimal temperature varies in inverse proportion to the *résultante* index. His studies of the behavior of the leukocytes in connection with the course of the infection have convinced him that treatment of infection should be focussed on means to increase the forces of the defensive leukocytes involved. Leukogenous medication should be our aim, and for this, sodium nucleinate, isotonic sugar solution, and turpentine are the main reliances.

Progrès Médical, Paris

Jan. 6, 1919, **34,** No. 1

Extraction of Projectile in Lung. R. Didier.—p. 1; A. Chalier.—p. 3.
Individualized Prophylaxis of Infections in General. Bernheim.—p. 4.
Treatment of Influenza. M. Icard.—p. 4.

Jan. 11, 1919, **34**, No. 2

- *Deficiency Disturbances in Soldiers. L. Bruntz and Spillmann.—p. 9.
- Film Treatment of Wounds. A. Combault.—p. 13.

Deficiency Disturbances from Army Ration.—Bruntz and Spillmann relate that they were impressed with the resemblance between the symptoms of trench foot and the symptoms presented by animals whose food does not contain vitamins. Their research has apparently confirmed that the cold and wet are merely secondary factors. The more they studied the experimental avitaminoses, the firmer became their conviction that many of the pathologic conditions noted in the soldiers at the front were the direct result of deficiencies in the diet. The neuritic disturbances of "trench foot" precede the trophic disturbances, accompany and follow them, and their distribution is the same as in pigeons on deficiency diets, and in beriberi. The neuritis with "trench foot" entails paresthesias, pains (as in the rabbit), motor disturbance (as in the pigeon), and circulatory disturbance with edema (as in the pigeon), with eschars. This insidious neuritis is thus enough alone to explain all the lesions of trench foot and the opportunity for secondary infection of all kinds, favored by cold and wet. They are inclined to ascribe to the deficient diet certain other disturbances, pains in the legs, asthenia, indigestion, certain psychoneuroses, insomnia, etc.

Jan. 18, 1919, **34**, No. 3

- *Organic Basis of Neurasthenia. Bernheim.—p. 19.
- *Transitory Lapse of the Will Power. P. Voivenel and R. Mallet. —p. 19.
- Digitalis Preparations. A. Remond and Minvielle.—p. 20.

Neurasthenia.—Bernheim remarks that he has been much disappointed to find that neurasthenia resists treatment by suggestion, which is so successful with simple irritable nervous weakness. In 50 per cent. of his cases of neurasthenia, he found the knee and foot reflexes exaggerated, and he accepts this as a sign of an actual organic lesion. Neurasthenia has been rarely encountered in soldiers; it does not have an emotive origin, but it may follow typhoid, influenza, or certain other infectious diseases. The neurasthenia may assume the form of neuropsychasthenia with a tendency to melancholia, or the gastro-intestinal form, or there may be mild spinal symptoms. In his experience, neurasthenia lasts at least six months, and it may return periodically for some months or years, or may flare up anew after an acute infectious disease. It seems plausible to assume that neurasthenia is the result of toxemia from some upset in the nutritional biochemistry or in the endocrine system.

Lapsing of the Will Power.—Voivenel and Mallet refer to instances in which soldiers who had been cited for special bravery deserted their post in the presence of the enemy. The psychopathic basis was easily determined, and the occurrence thus explained as a transient *fugue*, that is, a transitory frenzy, like epileptic automatism.

Revue Médicale de la Suisse Romande, Geneva

February, 1919, **39**, No. 2

- *The Floating Testicle and its Misdeeds. R. Koenig.—p. 57.
- *Formation of Precipitin after Injection of Serum. Nakata.—p. 64.
- Defensive Reactions in Epidemic Influenza. F. Wanner.—p. 71.
- Appendicitis of Influenzal Origin. Veyrassat.—p. 78.

The Floating Testicle.—Koenig reports a case in which the undescended left testicle repeatedly worked down into the inguinal canal and became incarcerated there under the skin, causing pain until it finally slipped back or could be pushed back into the abdomen. The incarcerated testicle finally became accompanied by symptoms of internal incarceration of the bowel, persisting after the testicle had spontaneously slipped back into the abdomen. The operation revealed a cord attached at both ends to the mesentery, an actual ligament, attached in the center to the testicle, and progressively obliterating the lumen of the small intestine. Koenig adds that after 30 the floating testicle may be regarded as certainly atrophied, and we need not hesitate to remove it or push it back into the abdomen and close the outlet.

Development of Precipitin After Injection of Serum.—Nakata reports research undertaken to decide how long it takes for precipitin to develop after injection of a heterogenous serum. He found that it takes from five to eleven days for the precipitin to form after a single injection of the antigen. It reaches its maximum between the ninth and fifteenth days, and persists till its final disappearance from the thirty-third to the seventieth day. The precipitin reaction is stronger and more lasting with beef serum, and least with goat serum. The amount of the antigen injected, above a minimum of 5 c.c., does not seem to influence the character of the precipitin reaction, but it is most intense by intravenous or intraperitoneal injection. In rabbits, the intravenous injection is the best. In guinea-pigs he was unable to obtain a precipitin reaction with a single injection of the antigen.

Revue Mens. de Gynécologie, d'Obst. et de Péd., Paris

March, 1919, **14**, No. 3

- *Melena in Newborn Infants. P. Balard.—p. 85.
- *Extramembranous Pregnancy. C. Gonnet.—p. 91.
- *Pituitary Preparations in Obstetrics and Gynecology. L. Pouliot.—p. 93. Conclusion.

Gastro-Intestinal Hemorrhage in the Newly Born.—Balard reports two cases in which, the second day after birth, there was melena, accompanied in one case by hematemesis. There was no excoriation of the mouth or of the breasts to which the hemorrhage could be traced, and the blood could not have been swallowed during the birth process as the blood was a fresh red. The tendency to hemorrhage kept up for twenty-four hours and then yielded to hypodermic injection of gelatinized serum (20 c.c.) plus 10 c.c. of serum from a horse that had been repeatedly bled. The blood of the newly born has not become accustomed to the new conditions of circulation, and mechanical factors readily explain the tendency to hemorrhage at this time. The arterial tension was rather low after the hemorrhage had begun, but it ran up above normal after arrest of the hemorrhages. This suggests that it may have been above normal to start with, but the hemorrhages had brought it down so low that infusion of these comparatively large amounts of fluids did no harm and only good.

Extramembranous Pregnancy.—The profuse watery, pinkish uterine discharge at the eighth month, with living fetus, was explained by finding that the fetus had escaped through a tear in the membranes and had developed outside of them. The fetus weighed 1,450 gm. and showed no signs of deformity, but died three hours after birth. Gonnet knows of only forty cases of extramembranous pregnancy on record. Breech presentation is the rule in these cases, and the placenta is usually of the marginata type.

Pituitary in Obstetrics and Gynecology.—This long review of recent literature on pituitary extracts is accompanied with ten pages of bibliographic references, but Pouliot remarks in conclusion, "The reader desirous to become completely posted on the subject will read with interest Mundell's article 'The Present Status of Pituitary Extract in Labor' in The Journal of the American Medical Association 68:1601, 1917. He will find there, besides a good bibliography, numerous statistics and critical analysis of certain unfavorable cases. Nothing in Mundell's work, however, conflicts with my conclusions or materially modifies them." Pouliot suggests that a pituitary extract might be added to the fluid for proctoclysis or to saline for infusion, with or without epinephrin. It might prove useful in this way in obstetrical or major gynecologic operations, to ward off or treat operative shock. It seems to act in such cases like epinephrin, only more mildly and the effect is more durable. He discusses the indications and technic in obstetric and gynecologic cases, especially its value in overcoming retention of urine in parturients and in starting up peristalsis, aside from its action on the genital organs.

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 12, 1919, **49**, No. 15

- *Changes in the Air Passages in Influenza. M. Askanazy.—p. 465.
- *Croup with Influenza. Coray.—p. 474.
- Errors in Determination of Volume of Blood Platelets. J. Aebly. —p. 478.
- *Sugar Treatment of Pulmonary Tuberculosis. P. von Schulthess Rechberg.—p. 489.

Jan. 11, 1919, **34**, No. 2

*Deficiency Disturbances in Soldiers. L. Bruntz and Spillmann.—p. 9.
Film Treatment of Wounds. A. Combault.—p. 13.

Deficiency Disturbances from Army Ration.—Bruntz and Spillmann relate that they were impressed with the resemblance between the symptoms of trench foot and the symptoms presented by animals whose food does not contain vitamins. Their research has apparently confirmed that the cold and wet are merely secondary factors. The more they studied the experimental avitaminoses, the firmer became their conviction that many of the pathologic conditions noted in the soldiers at the front were the direct result of deficiencies in the diet. The neuritic disturbances of "trench foot" precede the trophic disturbances, accompany and follow them, and their distribution is the same as in pigeons on deficiency diets, and in beriberi. The neuritis with "trench foot" entails paresthesias, pains (as in the rabbit), motor disturbance (as in the pigeon), and circulatory disturbance with edema (as in the pigeon), with eschars. This insidious neuritis is thus enough alone to explain all the lesions of trench foot and the opportunity for secondary infection of all kinds, favored by cold and wet. They are inclined to ascribe to the deficient diet certain other disturbances, pains in the legs, asthenia, indigestion, certain psychoneuroses, insomnia, etc.

Jan. 18, 1919, **34**, No. 3

*Organic Basis of Neurasthenia. Bernheim.—p. 19.
*Transitory Lapse of the Will Power. P. Voivenel and R. Mallet. —p. 19.
Digitalis Preparations. A. Remond and Minvielle.—p. 20.

Neurasthenia.—Bernheim remarks that he has been much disappointed to find that neurasthenia resists treatment by suggestion, which is so successful with simple irritable nervous weakness. In 50 per cent. of his cases of neurasthenia, he found the knee and foot reflexes exaggerated, and he accepts this as a sign of an actual organic lesion. Neurasthenia has been rarely encountered in soldiers; it does not have an emotive origin, but it may follow typhoid, influenza, or certain other infectious diseases. The neurasthenia may assume the form of neuropsychasthenia with a tendency to melancholia, or the gastro-intestinal form, or there may be mild spinal symptoms. In his experience, neurasthenia lasts at least six months, and it may return periodically for some months or years, or may flare up anew after an acute infectious disease. It seems plausible to assume that neurasthenia is the result of toxemia from some upset in the nutritional biochemistry or in the endocrine system.

Lapsing of the Will Power.—Voivenel and Mallet refer to instances in which soldiers who had been cited for special bravery deserted their post in the presence of the enemy. The psychopathic basis was easily determined, and the occurrence thus explained as a transient *fugue*, that is, a transitory frenzy, like epileptic automatism.

Revue Médicale de la Suisse Romande, Geneva

February, 1919, **39**, No. 2

*The Floating Testicle and its Misdeeds. R. Koenig.—p. 57.
*Formation of Precipitin after Injection of Serum. Nakata.—p. 64.
Defensive Reactions in Epidemic Influenza. F. Wanner.—p. 71.
Appendicitis of Influenzal Origin. Veyrassat.—p. 78.

The Floating Testicle.—Koenig reports a case in which the undescended left testicle repeatedly worked down into the inguinal canal and became incarcerated there under the skin, causing pain until it finally slipped back or could be pushed back into the abdomen. The incarcerated testicle finally became accompanied by symptoms of internal incarceration of the bowel, persisting after the testicle had spontaneously slipped back into the abdomen. The operation revealed a cord attached at both ends to the mesentery, an actual ligament, attached in the center to the testicle, and progressively obliterating the lumen of the small intestine. Koenig adds that after 30 the floating testicle may be regarded as certainly atrophied, and we need not hesitate to remove it or push it back into the abdomen and close the outlet.

Development of Precipitin After Injection of Serum.—Nakata reports research undertaken to decide how long it takes for precipitin to develop after injection of a heterogenous serum. He found that it takes from five to eleven days for the precipitin to form after a single injection of the antigen. It reaches its maximum between the ninth and fifteenth days, and persists till its final disappearance from the thirty-third to the seventieth day. The precipitin reaction is stronger and more lasting with beef serum, and least with goat serum. The amount of the antigen injected, above a minimum of 5 c.c., does not seem to influence the character of the precipitin reaction, but it is most intense by intravenous or intraperitoneal injection. In rabbits, the intravenous injection is the best. In guinea-pigs he was unable to obtain a precipitin reaction with a single injection of the antigen.

Revue Mens. de Gynécologie, d'Obst. et de Péd., Paris

March, 1919, **14**, No. 3

*Melena in Newborn Infants. P. Balard.—p. 85.
*Extramembranous Pregnancy. C. Gonnet.—p. 91.
*Pituitary Preparations in Obstetrics and Gynecology. L. Pouliot.—p. 93. Conclusion.

Gastro-Intestinal Hemorrhage in the Newly Born.—Balard reports two cases in which, the second day after birth, there was melena, accompanied in one case by hematemesis. There was no excoriation of the mouth or of the breasts to which the hemorrhage could be traced, and the blood could not have been swallowed during the birth process as the blood was a fresh red. The tendency to hemorrhage kept up for twenty-four hours and then yielded to hypodermic injection of gelatinized serum (20 c.c.) plus 10 c.c. of serum from a horse that had been repeatedly bled. The blood of the newly born has not become accustomed to the new conditions of circulation, and mechanical factors readily explain the tendency to hemorrhage at this time. The arterial tension was rather low after the hemorrhage had begun, but it ran up above normal after arrest of the hemorrhages. This suggests that it may have been above normal to start with, but the hemorrhages had brought it down so low that infusion of these comparatively large amounts of fluids did no harm and only good.

Extramembranous Pregnancy.—The profuse watery, pinkish uterine discharge at the eighth month, with living fetus, was explained by finding that the fetus had escaped through a tear in the membranes and had developed outside of them. The fetus weighed 1,450 gm. and showed no signs of deformity, but died three hours after birth. Gonnet knows of only forty cases of extramembranous pregnancy on record. Breech presentation is the rule in these cases, and the placenta is usually of the marginata type.

Pituitary in Obstetrics and Gynecology.—This long review of recent literature on pituitary extracts is accompanied with ten pages of bibliographic references, but Pouliot remarks in conclusion, "The reader desirous to become completely posted on the subject will read with interest Mundell's article 'The Present Status of Pituitary Extract in Labor' in The Journal of the American Medical Association 68:1601, 1917. He will find there, besides a good bibliography, numerous statistics and critical analysis of certain unfavorable cases. Nothing in Mundell's work, however, conflicts with my conclusions or materially modifies them." Pouliot suggests that a pituitary extract might be added to the fluid for proctoclysis or to saline for infusion, with or without epinephrin. It might prove useful in this way in obstetrical or major gynecologic operations, to ward off or treat operative shock. It seems to act in such cases like epinephrin, only more mildly and the effect is more durable. He discusses the indications and technic in obstetric and gynecologic cases, especially its value in overcoming retention of urine in parturients and in starting up peristalsis, aside from its action on the genital organs.

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 12, 1919, **49**, No. 15

*Changes in the Air Passages in Influénza. M. Askanazy.—p. 465.
*Croup with Influenza. Coray.—p. 474.
Errors in Determination of Volume of Blood Platelets. J. Aebly. —p. 478.
*Sugar Treatment of Pulmonary Tuberculosis. P. von Schulthess-Rechberg.—p. 489.

and a corresponding rod of bone and periosteum is cut from the crest of the tibia, about 1 cm. thick. This bar is worked through the neck and head from the trochanter, after a passage has been dug for it, till the end emerges in the acetabulum. The porous condition of the bone renders this easy. It is important to have the periosteum project about 1 cm. beyond the end of the bar of bone. This end is turned down over the bone which prevents the periosteum from being stripped off from the bar as it is worked into place. He has thus operated in four cases, and the results of this slight operation to ensure remineralization of the joint bones have been very favorable.

Anales de la Facultad de Medicina, Lima

January-February, 1919, **2**, No. 7

*Mycosis of the Skin. R. E. Ribeyro.—p. 1.
*Aphorisms of Clinical Urology. M. A. Velasquez.—p. 6.
*Insufficiency of the Kidneys in Influenza. J. Arce.—p. 18.
Psychology in Early History of Peru. H. Valdizan.—p. 25. Cont'n.
*Transmission of Leishmaniosis to Animals. M. N. del Aguila.—p. 42.
*The Specific Agent of Yellow Fever. J. Arce.—p. 53.
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Mycotic Dermatosis.—The man's arms, legs and chest showed thirty or forty pustules, the eruption having first appeared two years before, while at his country home, and proving rebellious to all measures. Several similar cases were known on the hacienda. A fungus was cultivated from the lesions, and the patient was sent to a spa for treatment with the waters. The fungus is shown in a colored plate; it is of the hyphomycetes type.

Urologic Aphorisms.—Velasquez dedicates his collection of 127 aphorisms to medical students in general. He says of oliguria that it is a sign of very grave prognosis in cases of intoxication, and warns that the tissues must be supplied with water at once to combat dehydratation, besides favoring elimination of the toxins. Frequent micturition in the obese warns of kidney disease. Frequent micturition, with or without polyuria, is a constant sign of chronic interstitial nephritis, especially in the beginning. Any discrepancy between the color of the urine and its density should suggest pathologic conditions. Every case of chronic disease that shows no improvement and in which no cause for the sickness can be discovered, may be classed as having a tuberculous, syphilitic or diabetic origin. Hyperchlorhydria calls for determination of the sodium chlorid content of the urine. Asthma with nocturnal polyuria suggests nephritis or diabetes; if the pulse is hard, nephritis may be assumed. Incontinence of urine ten or twelve days after childbirth suggests a vesicovaginal fistula. Most of the other aphorisms refer to the findings of different chemical tests.

The Kidneys in Influenza.—Arce reports eight cases of influenzal lobar pneumonia in which there was pronounced azotemia, but it proved transient and the patients recovered. Dalimier reported last year that massive albuminuria in influenza was observed almost exclusively in the fatal cases. Recovery with this finding was absolutely exceptional. In none of Arce's cases was the albuminuria of this massive type.

Transmission of Superficial Leishmaniosis to Animals.—Del Aguila reviews the research in this line by Splendore, Wenyon, Strong and others, and reports the first successful attempt in Peru to inoculate animals with American leishmaniosis, and the first anywhere of successful inoculation of rodents directly from man. His research has demonstrated further that the testicles are best adapted for the inoculation.

Etiology of Yellow Fever.—Arce reviews Noguchi's recent research on the specific agent of yellow fever. He says that before we can accept Noguchi's conclusions, the final proof must be obtained, namely, that pure cultures of the leptospira he has isolated will induce yellow fever in man, and also the determination of the cycle of evolution of the given leptospira in the mosquito until its final reimplantation in its vertebrate host. It would be an immense advantage if the leptospira or other germ should prove the actual specific agent, as this would enable us to detect the abortive and masked cases in adults and children which now perpetuate the scourge.

Annaes Paulistas de Med. e Cirurgía, S. Paulo, Brazil

November, 1918, **9**, No. 11

*Treatment of Tetanus. E. S. Gomes.—p. 241.

Treatment of Tetanus.—Gomes relates that tetanus makes many victims in his part of Brazil. During ten years closing with 1915, there were 10,045 deaths from tetanus recorded throughout the state of S. Paulo. The annual coefficient from tetanus on the general mortality ranges annually from 9.9 to 19 per thousand. During the same decade there were 280 deaths ascribed to tetanus in the city of S. Paulo, 207 of which were in infants under 2. Rio de Janeiro also has a high tetanus death rate, 713 in a recent three year period, that is, about 9.5 per thousand of the total mortality. The proportion at Bahia has ranged from 15.8 to 28.3 per thousand of the total mortality. This high prevalence of tetanus is due in large measure to the fact that shoes are not worn, aside from the high incidence of tetanus from infection of the umbilical cord. In order to decide definitely what reliance can be placed on drugs in treatment of tetanus, Gomes treated large numbers of guinea-pigs with chloral, magnesium sulphate, sodium persulphate or phenol, after inoculation with tetanus. None displayed any efficacy, while antitetanus serum prevented the development of the disease even when injected subcutaneously several hours after the inoculation. Injected intraspinally its effect was most dependable. The intravenous route is preferable to the subcutaneous. In his clinical cases in recent years he has given from 5 to 10 c.c. of the antiserum by all three routes.

Archivos Españoles de Enf. del Ap. Digestivo, Madrid

February, 1919, **2**, No. 2

Physiologic Bases for the Dietary. J. G. Ocaña.—p. 65.
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Endemic Dysentery in Granada.—Torres describes an epidemic of exacerbation of endemic dysentery in Granada. Fourteen cases in two months in a population of 4,000, in a remote valley in Granada, shows that amebic dysentery cannot be regarded in Spain as an exotic disease.

Hypodermic Treatment of Habitual Constipation.—Belaunde refers to F. F. Martinez' method of subcutaneous injections of sodium sulphate in treatment of constipation. The dose is 2 c.c. of a solution of 25 gm. sodium sulphate (by weight), in 100 c.c. of distilled and sterilized water (by volume). This amount is injected daily subcutaneously in the arm for ten or twelve days. When the stools become fluid, almost diarrheic, the treatment is suspended. The tendency to constipation seems to be permanently cured. In the innumerable cases thus treated, the constipation that had been rebellious for many years has not returned during the months and years since this course of treatment. If the course fails, he recommences with twice or three or four times the doses. But it has never failed in his experience when conscientiously applied, although some cases required thirty or forty injections. If the series is suspended, for any reason, it has to be commenced over again from the first. No saline or other purges must be allowed during the course of treatment or afterward. Belaunde writes to emphasize the *maravillosos resultados* obtained with this hypodermic treatment, and to reaffirm that, done according to Martinez' directions, a cure can be counted on in the overwhelming majority of cases. He summarizes eighty case histories to show the condition before and after the successful treatment. Spontaneous defecation occurred after the fourth injection of the sodium sulphate, and the stools became soft at the seventh, in most of the cases.

Crónica Médico-Quirúrgica, Havana

January, 1919, **45**, No. 1

*Paralysis of the Third Pair. J. S. Fernández.—p. 5.
Hemianopsia from Occipital Trauma. J. S. Fernández.—p.
Influenza and Its Treatment. T. Hernández.—p. 12.
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January, 1919, 45, No. 1

*Paralysis of the Third Pair. J. S. Fernández.—p. 5.
Hemianopsia from Occipital Trauma. J. S. Fernández.—p. 7.
Influenza and Its Treatment. T. Hernández.—p. 12.
Hemophilia. M. M. Escudero.—p. 16.

Paralysis of the Third Pair.—Santos Fernández states that the girl of 8, in playing, was hit on the head, just back of the frontal region. When he saw the child, over seven months later, the complaints were of headache in the vertex region, and diplopia, with slight dilatation of the pupil and divergent left strabismus, but no ptosis. On suspicion of inherited syphilis, tentative specific treatment not only cured the ocular disturbances and headache but seemed to promote the growth and normal development of the child.

Medicina Ibera, Madrid

March 1, 1919, **6**, No. 69

*Indications for Treatment in Various Forms of Nephritis. S. Pascual. —p. 189. Conc'n.
Hyperchlorhydria in Spain. R. M. Terol.—p. 193. Cont'n.
Graphic Record of Physical Signs of Pulmonary Tuberculosis. A. N. Blasco.—p. 195.

Nephritis.—In this closing instalment, Pascual discusses the general principles for treatment of nephritis, acute and chronic. He says that acute exacerbation of chronic nephritis may call for operative intervention on account of intense pain, hematuria, oliguria or anuria, or high fever and bad general condition. The latter would seem to contraindicate any operation, but Pousson, Israel, Legueu, Edebohls and others regard this as often imperative. Pascual warns that, whatever operation is attempted, all are grave with chronic disease of the kidney. The general anesthesia required is fraught with exceptional peril in cases of chronic nephritis. Another objection is that chronic nephritis is very frequently bilateral. Painful nephritis may require deep nephrotomy, incising the convex margin of the kidney down to the pelvis. Marsan compiled 82 cases in which this was done, with 66 complete cures and 8 with essential improvement, 3 not modified by the operation and 5 deaths. Pousson has reported 14 cured completely, 2 temporarily improved, no modification in one, and one death among 18 operative cases of nephritis dolorosa. Pascual remarks in conclusion that hematuric nephritis is the one form that benefits most by surgical measures. Hematuria of renal origin generally occurs only in unilateral chronic nephritis, of the type in which the lesions are limited to a few glomeruli. Nephrotomy has given sixteen complete cures in the 37 operative cases compiled by Pousson; the operative mortality was 8.3 per cent. Pascual regards nephrotomy as the preferable operation, generally speaking, when surgical measures are required for nephritis. Next comes decapsulation; nephrectomy only as a matter of necessity.

Revista Médica, Puebla, México

April 15, 1919, **1**, No. 9

*Medical Abortion. A. L. Hermosa.—p. 193.
New Tendencies in Medicine. F. Paredes.—p. 196. Conc'n.
*To Facilitate Intravenous Injection. F. Robles.—p. 203.

Medical Abortion.—Hermosa explains that the progress of medical science in recent years has done away with almost the last necessity for professional infanticide. Cesarean section will overcome contracted pelvis, and we have measures to combat the autointoxication responsible for uncontrollable vomiting, albuminuria of pregnancy, grave jaundice and eclampsia, without sacrificing the life of the child. In conclusion he cites Vinay's statement that all the women delivered prematurely, on account of heart disease, at a certain large hospital died at the time or soon afterward.

To Facilitate Intravenous Injection.—Robles refers to the way in which the veins at the elbow sometimes refuse to swell when constriction is applied above, in readiness for the intravenous injection. To overcome this inhibiting reflex action he has the arm held hanging loose while he diverts the patient's attention.

Revista de Medicina y Cirugía, Havana

March 10, 1919, **24**, No. 5

*Treatment of Elephantiasis of the Leg. J. E. Ferrán.—p. 129.
Case of Prostatic Obstruction. D. Geiringer and J. Campuzano. —p. 136.

Elephantiasis of the Leg.—Ferrán comments on the frequency of elephantiasis in Cuba, and describes a method of treatment which is giving most satisfactory results. In a case illustrated "before and after," there is now no difference in size between the normal and the elephantiasic leg, when before the intervention this leg was enormous. He cuts out two ellipses, down to the muscle, several inches long, axial to the leg but not to each other. He then sutures the lips of the ellipse together, passing the catgut through the skin, then along the edge of the other tissues without traversing them, down to the muscle. After freshening the aponeurosis, the needle is passed horizontally in the depths of the muscle, then out on the other side in the same way. Four or five catgut threads are thus used to suture the lips of the ellipse together in a kind of "anastomotic inclusion," as he says. The lymphatics, veins and arteries form actual siphons by the intimate connection thus realized between the derma and the muscle. Other sutures are taken as usual, which serve for drainage, and a small wick is left at the lowest point of the incision. The operation is done under local anesthesia, *and the patient should sit with his leg down at the forty-eighth hour.* A compressing elastic bandage aids in the rapid reabsorption of the elephantiasic tissues. They disappear more completely than when masses are excised.

March 25, 1919, **24**, No. 6

*Keratomalacia and its Treatment. R. Guiral.—p. 157.
Influenza at Batabanó. P. Pons y Zamora.—p. 160.

Keratomalacia and Its Treatment.—Guiral emphasizes that every ophthalmologist has to keep up with the progress in general medicine in order to practice intelligently. If he restricts his studies to the literature on his specialty, he will be neither an ophthalmologist nor anything (*ni oculista ni nada será*). This is especially evident in respect to keratomalacia. Until recently, he says, the family physician when he found he could do nothing in xerophthalmia, and that blindness was impending, ordered the child taken to an ophthalmologist, and the latter had to bear the stigma of the child's becoming blind, besides his sympathy with the family's grief over the misfortune. Recent research on vitamins has solved the mystery of keratomalacia, and shown how to ward it off and cure it. Cod liver oil and raw milk contain the vitamins the system is craving, but the families would shrink from giving either of them to a 2 months' babe with enteritis. In their ignorance of vitamins, they would consider such advice preposterous. Fortunately, however, lemon juice answers the same purpose, and this can be given to young infants. He orders strong lemonade, two lemons to a tumbler of sweetened water, and has the child given four table spoonfuls a day, by the mouth if possible, if not, by the rectum in four small enemas. By the end of eight or ten days not only the eyes return to normal, but the general condition shows marked improvement. He has thus treated twelve infants with keratomalacia, and except for a slight cloudiness in two of them, not seen until very late, all the eyes are completely normal.

Revista de Medicina y Cirugía Prácticas, Madrid

Feb. 28, 1919, **122**, No. 1544

Influenza in Granada. D. A. Ayala.—p. 225.

Semana Médica, Buenos Aires

March 6, 1919, **2**, No. 10

Simple Megacolon. Complications and Treatment. H. Taubenschlag. —p. 229.
Mortality of Buenos Aires in Last Decade. E. R. Coni.—p. 245.
Manometric Control of Injections. N. L. Cúneo.—p. 246.

Siglo Médica, Madrid

March 15, 1919, **66**, No. 3405

The Conception of Pretuberculosis. B. Gil y Ortega.—p. 205. Cont'n.
Treatment of Pneumonia. Pinilla.—p. 209.
Commercial Hydrogen Dioxid. M. M. Ibáñez.—p. 210.
Introduction to Study of Operative Surgery. J. G. Capdevila.—p. 211. Cont'n.

Vida Nueva, Havana

March, 1919, **11**, No. 3

Scientific Pan-Americanism. J. E. Lopez-Silvero.—p. 49.
Unethical Practices in the Practice of Medicine.—J. B. Capella.—p. 55.
Luminescence and Radioactivity. A. Pratelle.—p. 66.

been held in check: that is, typhus fever, cholera, recurrent fever, typhoid, scurvy and malaria, and, not least important, smallpox. Influenza with pneumonia, occurring in an epidemic sweeping over the eastern and western hemispheres, has been the epidemic that has baffled medical science and stands out with startling distinctness as the one uncontrolled epidemic. The death toll of pneumonia has almost equaled the battle casualties of those killed and dying of wounds in the American army. In spite of the failure to control influenza and pneumonia, this is an extraordinary record of disease control, and never, in any previous war, has the knowledge of medical science and sanitation, and the application of this knowledge been able to accomplish so much. We saw typhoid start as an epidemic in Belgium, in 1914, spread with its old-time fury among the troops at that point, and then we saw it conquered by sanitation and vaccination. We have seen typhus spread with terrible fury in Serbia and in Austria, we have seen typhus and recurrent fever break out in Russia, and again through the knowledge that these diseases are carried by body lice the epidemics were controlled. Cholera has started and been controlled through sanitation and vaccination, by both Russians and Italians. Tetanus has been practically eradicated among the wounded. Smallpox, appearing among the recruits coming from civil life, has been so quickly controlled that there were, from January, 1917, to April, 1919, in the American army of over 2,000,000 men, but six deaths from this disease. To appreciate fully the meaning of this result of preventive medicine and what the American medical profession has accomplished, let us study the battle casualties and disease rates of former wars, and, by this contrast, appreciate the achievement.

DESTRUCTIVE EFFECTS OF DISEASE IN FORMER WARS

Of course, any accurate and minute comparison requires carefully kept statistics, and such records are available only for the wars of the nineteenth century. Surgeons and physicians have been with the armies since antiquity, but they were as part of the retinue of some king, general or noble, and were not assigned to troops. Charles the Bold of Burgundy, in the last third of the fifteenth century, was the first one that definitely assigned surgeons to the troops as well as to the officers. This seems to be the isolated instance of a single ruler, for it was not till a hundred years later that the first surgeons were supplied to the British army, in an expedition to St. Quentin. In the middle of the sixteenth century the armies of Charles V did not possess surgeons or medical corps, for it is reported as an extraordinary occurrence that, in the siege of Metz, when Charles V, beaten by disease and famine, was forced to raise the siege of this town, his young opponent, the Duc de Guise, gathered the abandoned sick and wounded of the retreating imperial army and, contrary to the customs and traditions of the time, had them cared for by his own physician, the renowned Ambroise Paré.

However, it was not until the seventeenth century, in the time of Louis XIII of France, that surgeons were regularly appointed to the French armies, and not till 1660, when a standing army came into existence in England, were surgeons first regularly appointed to regiments in the English army. Not till the middle of the eighteenth century, however, was there a well-organized medical service in any of the armies. Field hospitals were not thought necessary until Cardinal Richelieu installed them, in 1639, in villages behind the fighting lines.

It is not usually realized that some of the greatest wars of modern times were fought with practically no provision made for the care of the sick and wounded, that the decision of wars has at times depended more on the wastage of the armies by disease than on the valor of the soldiers or the genius of the generals. The Emperor Frederick Barbarossa, in the Middle Ages, saw one army in Italy annihilated by sunstroke. Ten years later, after he had succeeded in storming and conquering the city of Rome itself, a pestilence swept away another army, and he was forced to flee, a fugitive, to Germany. In the Thirty Years War, the Swedish army under Torstenson fought its way from the Baltic Sea to the very gates of Vienna, where the bubonic plague so decimated his forces that he was compelled to withdraw and lose the campaign so brilliantly won. In the middle of the eighteenth century the bubonic plague again so raged, this time among the Austrian and Russian armies, that these nations were forced to bring the war to an unexpected ending and to make an unfavorable peace with Turkey. In more modern times, the disorganization and discouragement produced by disease in the French forces before Sebastopol was not a small element in hurrying the government of France to conclude peace before the ultimate aims of the campaign were accomplished.

For a background to modern hygiene, let us consider the occurrence of disease in the Thirty Years War, 1618-1648, a war fought between Protestant Swedes and northern Germans, aided, toward the end, by the French, against the imperial Catholic armies of Spain, Bavaria and Austria. This war had all the bitterness of other religious wars. The armies were often an unpaid rabble of mercenaries greedy for loot, who lived on the country, but who deliberately burned and destroyed all they could not use. They methodically wasted entire districts, thus adding famine to pestilence, for wherever these armies went they took with them and spread typhus fever. The numbers engaged, relative to modern times, were small, an entire army representing no more than one or two modern divisions, the strength of either side averaging from 20,000 to 30,000, occasionally more, often less. Bodart sums up the battle casualties of the thirty greatest engagements of this war as averaging 15 per cent. for the victors and 30 per cent. for the defeated antagonist. These losses were small indeed compared to loss by disease. The sick and wounded were uncared for except by their comrades or by the camp-followers; or they were left in villages or cities to be aided by the civilians, and were universally the foci of infection from which typhus fever spread far and wide. Smallpox was ever present in the communities. Dysentery and scurvy added their toll of death in the armies; typhus fever never ceased its virulent devastation, and, after 1632, bubonic plague imposed its terrors on the armies and stricken peoples alike. Great as was the destruction of life among the soldiers, whether from battle or by disease, the loss of life was always greater among the noncombatants, not only because of famine and pestilence, but also because of the brutal and barbaric conduct of the war. Prinzing records that the population of Wurttemberg lost by war, famine and pestilence, in five years, 300,000 persons, or three quarters of its inhabitants.

In the Electorate of Saxony, bubonic plague, typhus and dysentery, in two years, carried off 934,000 of the inhabitants. Three quarters of the entire population of Germany, over whose fields the war had chiefly been waged, were blotted out of existence, for the population dropped from 16,000,000 to 4,000,000, the logical consequences of barbarous warfare and no sanitation.

By the middle of the eighteenth century the armies of England and France had regularly organized medical corps. With its increased responsibilities the medical corps of England had been given an equivalent increased authority and independence, but the French medical service, from the eighteenth century even through the war of 1870, had neither independence nor authority, but was a subordinate part of the intendance, or quartermaster's department. In spite of the improved ideas of care of the sick and wounded in the armies of the eighteenth century, the mortality rate diminished but little. The hospitals were still only shelters for the very sick. Two, four, or even six patients were still crowded on a single bed. Overrun with vermin, with absolutely no ventilation, filthy beyond description, they still propagated typhus, plague and dysentery. Sir John Pringle, in discussing the causes of mortality in war, names hospitals as an important factor. And Turpin de Crisse declared that in the wars of the decade from 1731 to 1741 more men died in hospitals from lack of care than lost their lives in combat.

Typhus fever still raged as an epidemic among the armies in the Wars of the Spanish Succession, and in the Seven Years War of Frederick the Great. It was not till the nineteenth century, after the Napoleonic Wars, that the French hospitals showed any improvement. On the other hand, it was because of the experiences in the Napoleonic Wars that the English were able to improve the sanitary care of their wounded. This the historian Napier realizes, and he pays tribute to the success achieved:

> The extraordinary excellence of the medical officers may be said to have decided the day at Vittoria, for their exertions undoubtedly added a full division to the strength of Wellington's army, and without these 5,000 it is doubtful if his Lordship, with his unrivaled talent, could have carried the day.

Their efforts were directed more toward cure than prevention, although Jenner had, by the end of the eighteenth century, shown the first means of control, by preventive vaccination, of one of the decimating plagues, that of smallpox. In strange contrast to his habitual indifference to the fate of his sick and wounded, Napoleon seized on the discovery of Jenner, and by 1809 had succeeded in having his entire army vaccinated. There seems to be a general agreement that no man ever was more indifferent or cared less for the salvage of the sick and wounded of his armies than Napoleon. Duncan says that abandonment of the wounded was the rule by the French in the Napoleonic Wars. When not abandoned, they were huddled in buildings of every sort and left to die.

It is of more than passing interest that during Napoleon's war against Prussia, 1806–1807, typhoid seems to have been recognized. The French physicians at this period differentiated and accurately described its symptoms and lesions. From this time epidemics of typhoid are recognized and separated from the real typhus, which still ravaged both armies and population.

The retreat from Moscow and the Russian campaign of 1812 was probably the greatest military disaster of modern times. From recent authoritative French figures Bodart estimates that 680,000 crossed the frontier with Napoleon. Dysentery severely attacked the armies after they had crossed the Polish frontier, 80,000 men being down with it at one time. Of the 612,000 fighting strength, there returned to the frontier, according to Bodart, but 112,000 men. Lemazurier says that the great majority of the 30,000 French prisoners left at Vilna died. Faure claims that all of the French soldiers who fell into the hands of the Russians succumbed to typhus fever. It seems probable, therefore, that there were 100,000 men killed in battle, and at least 350,000 perished from starvation, cold and disease. Prinzing says that the instinct of self-preservation had kept the army together in a common line of march from Moscow to Vilna and on to Niemen. He adds:

> After crossing the river, however, at this point, the few unfortunate soldiers who had survived the awful misery of the march, hungry, with clothes in rags, with torn shoes, alive with vermin, with frozen and gangrenous limbs, scattered in all directions, some going home and others to strongholds that were in the hands of the French. Thus typhus fever, with which all parts of the army were infected, was spread in a comparatively short time over a large part of Germany.

The pursuing Russians did not escape free from the scourge, for in the three months from October to December they lost 62,000 soldiers, most of whom died from typhus. It is stated that the Russian armies in this campaign lost 200,000 killed and 150,000 wounded. The total of death by disease is not recorded.

The German campaign, a year later, was no less disastrous, and among the French and their allies there seems to have been some 60,000 killed and 196,000 wounded during 1813. Duncan thus describes the result of this campaign:

> But a few fragmentary battalions followed the eagles of Napoleon across the Rhine in November. The army lay scattered amid the villages on the route from Germany, the men dying by thousands and spreading a pestilence among the inhabitants. Reliable observers say that the retreat from Leipzig was no less ruinous than the retreat from Moscow, although there was no cold nor famine. The utter ruin of the army was the legitimate fruit of utter neglect of the sick and wounded.

Prinzing, studying the epidemic of typhus fever of 1813 and 1814, following the Russian campaign, believes that between 2,000,000 and 3,000,000 people contracted this disease, spread broadcast by the scattered armies of Napoleon, over 10 per cent. of whom died.

The Spanish War, in its six years' duration, 1808–1814, cost France over 90,000 killed. The deaths by disease are variously estimated as from 300,000 to 460,000 among the French army. We know that typhus fever was widespread and virulent. We know that yellow fever, in 1810 and 1811, raged furiously in the southern portion of Spain. It is known that in the siege of Saragossa, for example, of the 100,000 inhabitants, 54,000 died of typhus; and of the 30,000 soldiers, 18,000 died of the same disease before the city was forced to capitulate.

In striking contrast to this was the work of the English in the peninsular campaign during 1808-1811, under Sir James McGrigor. This surgeon had been in the Walcheren expedition on the coast of Holland pesthole of tropical diseases into a healthy and safe terrain, that the engineering genius of the United States Army might be free to construct the canal. The French under De Lesseps had failed because of the epidemic and tropical diseases which were at that time uncontrollable. Disease had defied and overcome engineering skill and genius. Preventive medicine controlled and conquered.

Ten years ago the practical application of the knowledge gained from the study of the epidemic of typhoid fever of the Spanish-American War brought about the compulsory inoculation against typhoid in the United States Army. It had been shown by the Vaughn and Shakespeare Board that nearly 65 per cent. of the typhoid fever of that war was transmitted by contact of man with man, and was not water borne. Hence sanitation could only reduce typhoid to a certain level and not eradicate it. The introduction of compulsory typhoid inoculation in the army has practically eradicated the disease. Following the work of the English medical corps in the Boer War, a United States Army surgeon, F. F. Russell, made possible the practical application of this method in the U. S. Army and proved conclusively that typhoid fever could be completely controlled. The American Army Medical Corps has, in the recent war, discovered the transmissibility of trench fever by body lice, and thus has shown the means of prevention of this new disease which, while killing no one, rendered thousands of men useless for weeks and ineffective for fighting. This discovery came to save thousands of men for the fighting lines at a time when they were urgently needed.

MODERN CONTROL OF DESTRUCTIVE DISEASES

Medical science has today, therefore, within its grasp the power to control the diseases which, in former times, decimated warring armies and spread out from these armies among the noncombatant populations. Formerly, when war broke out, it was almost inevitably followed by some dread pestilence among the civil populations of the countries in which the war was waged. By proper sanitation and preventive inoculation, dysentery and cholera can be abolished; by vaccination armies can be protected against smallpox. Body lice disseminate typhus, recurrent fever, and trench fever, and by proper disinfestation of these vermin these diseases cease to occur. Through sanitation and preventive inoculation, typhoid fever, the scourge of the two previous wars, is absolutely controlled, and this includes also paratyphoid, which has been recognized as a separate entity only since the Spanish-American War. In the Spanish-American War, 60.5 per cent. of all deaths were caused by typhoid, and in the present war 85 per cent. were caused by pneumonia. The typhoid of the Spanish-American War was due to local causes and local epidemics. The pneumonia of this war was beyond control, and was part of a world-wide epidemic that swept over both hemispheres, and the morbidity and mortality of some of the cities of this country exceeded those of the camps. Subtracting the death rate caused by pneumonia from the total death rate by disease in the recent war, we have 2.2 per thousand for the entire army on both sides of the water, which is practically a peace-time death rate. Meningitis has caused, in this war, ten times as many deaths as typhoid fever; pneumonia has caused two hundred times as many. Mumps and scarlet fever, of the infectious diseases of the young men, remain as yet to be controlled, but they are not of great import in the armies in war. The disabling type of disease coming under the head of venereal disease has, in this war, been so controlled that the number of cases brought from civil life was greater than the number occurring in the American Expeditionary Forces in France, which was reduced to twenty-two per thousand per year, a rate only one eighth as high as the incidence among recruits coming from civil life, and only one third as high as the best that ever had been accomplished in the army before.

Influenza, measles and pneumonia, in the respiratory group, still stand as baffling problems, and their control has not been accomplished. Measles appeared and spread until it no longer had material on which to spread, as one attack confers immunity to a second. Pneumonia, following influenza or originating as a primary disease, still eludes control. But the knowledge which we have gained in this war of the methods of its spread, of the various infectious organisms which produce it, and their various types and varying virulence, of its occurrence as a secondary complication to measles and influenza, has enormously increased. The value of the facts thus learned are incalculable, and belief is justified that the problem is better understood than ever before, and that we soon shall see the solution of these problems.

The occurrence in the camps of meningitis, another disease of the respiratory group, as far as its portal of infection is concerned, has been forty-five times as frequent in the army as its occurrence in civil life among the same age group. This has been due to overcrowding and the diminution of air space allowed the individual soldier in badly ventilated barracks. The responsibility for these sanitary sins rests on the General Staff and not on the Medical Corps.

VALUE OF LESSONS LEARNED IN DETERMINING ACTION IN FUTURE

What then are the lessons that we can draw for future action? There is no question but that the salvage of human beings, the protection of troops from disease in an army, renews and saves the fighting forces. Until recently, until medical science could control disease during war time, armies had been more decimated and injured by disease than through battle casualties. Now that, except for epidemic spread of respiratory diseases, the communicable and epidemic spreading diseases can practically be controlled, the medical corps of an army has become an essential part of the fighting organization. Whole nations must now go to war. No longer can they mobilize a selected portion of volunteers and send them to fight the war and defend the nation. Since all the youth of the nation must mobilize and turn to war, it becomes the duty of a general staff to save its man power and to salvage it to the greatest extent possible. The history of the Crimean War, of our Spanish-American War, and our experience in the recent war have clearly shown that only through proper representation on the general staff by those men trained in such salvage, and by experts in such knowledge of sanitation, can this duty be performed. When the General Staff of the United States Army comes to realize this fully, one cannot conceive that it will fail to give proper representation in its councils and organization to the Medical Department. The practical necessity for this was finally recognized in the A. E. F. by General Pershing and three medical officers were detailed at General Headquarters as substantive members of the General Staff. Responsibility and authority cannot be separated, and only by such organization can adequate authority equal the inevitable responsibilities.

In the mobilization of the industrial forces of the nation by the Council of National Defense, the health of the nation and the protection of both nation and its armies was regarded of such importance that it demanded direct representation of the medical profession on this board. This is also true of the navy, for its Medical Department is represented on the General Board. Oddly enough, the anachronism still exists that in the General Staff of the United States Army the Medical Department is regarded as an outsider. The safeguarding of the health and fighting vigor of an army, the salvage of its wounded, the saving of man power through protection from disease are still regarded as foreign to staff organization. The medical and sanitary formations are still regarded as noncombatants, although those serving with the troops often go forward and mingle with them in the combats, that the morale of the men may be better sustained. Duty demands it, and they have shown themselves willing, in this war, to be unarmed combatants, not noncombatants. The ratio of the medical officers killed and dying of wounds has been exceeded only by that of the infantry and artillery, which branches necessarily bear the brunt of the battles. The pro rata death rate of the medical officers has exceeded that of aviators and of engineers.

This subject is a matter for congressional action, but the profession of this country, while the experiences of this war are still vivid in its mind, must turn to the Congress, must make an intelligent exposition of these facts, and must bring about, by legal enactment, an adequate representation of the Medical Department on the General Staff of the army.

EDUCATIONAL NEEDS OF THE MEDICAL PROFESSION

One lesson of the war which stands out with great distinctness is the necessity for the American Medical Association to continue its unceasing struggle to raise the standards of medical education in this country. Such are the increasing demands made on the medical profession that the young men entering it today must realize that the broad and excellent education obtainable is none too good. It is not asking too much to require that all medical schools which are permitted to continue should soon be raised to the A Class.

There is another urgent educational need in this country that should be taken up immediately: that is, increase in the postgraduate opportunities for medical study. The opportunities that are presented in this country are practically undeveloped. It is for the profession to develop them, and every member of the Medical Corps of the army should be given an opportunity to avail himself, for a certain number of weeks each year, of the chance to study some branch of medicine or surgery at some medical center—not required to do it at his own expense, but detailed by the government to take up, for a definite number of weeks, his chosen branch of study. Physicians acquire their knowledge best by daily contact with opportunities which broaden their experiences. The opportunity to do this at short intervals, rather than at intervals of two, three or five years, would produce better results.

NEED OF IMPROVED ORGANIZATION

One very important duty to be performed soon is the reorganization of the Medical Reserve Corps and the rearrangement of the Medical Reserve officers and of the medical officers of the National Guard into one National Reserve Corps. This must be done when a realization that the medical profession in the regular Medical Corps and in the Reserve and National Guard Corps are all members of one and the same profession, united in desire to serve and obtain a single objective. Those in the Regular Corps have specialized in the study of medicine in its application to military requirements. The Reserve and Guard Corps have specialized in clinical medicine, with sufficient knowledge of military requirements to permit of their early adaptation to military environment when war comes. Equal ethical responsibilities rest on all alike, since all are called together for the common purpose of caring for the sick and wounded of the army; but the amount of practical responsibility must be unevenly distributed among individuals, that proper organization may be perfected.

Authority of the individual must always equal his responsibilities. Military authority is always expressed by rank and cannot be separated from it. Hence rank, authority, and amount of responsibility must coincide. The Reserve and Guard Corps should not be discriminated against in rank, as they have been in the past, because it invariably prevents authority from equaling responsibility, and thus cripples efficiency. One solution would be to have all Reserve Corps officers of equal rank, such as captain, and have the office held bestow the authority in proportion to the responsibilities contained therein. The administrator of each hospital unit must always have supreme local authority, but there should be an appointed group of clinical consultants in the different specialized branches of medicine, surgery and sanitation for the proper correlation of clinical procedures, that there may be uniformly good treatment and care given equally to all sick and wounded in all hospitals. Medical and surgical specialization was developed in the army for the first time in this war, and beyond question it must remain permanently. These consultants should be utilized as medical and surgical advisers on clinical subjects to the Chief Surgeon, with direct access to him without intervening mechanism of departmental heads. It is axiomatic that these consultants must have sufficient rank and authority to equal their responsibilities, and necessarily higher rank than the commanding officers of the hospitals under their supervision. These are but suggestions, and it is unnecessary to go further into details at this time, but some solution of this problem must be found soon.

RELATION OF RED CROSS TO ARMY

The relationship of the Red Cross and the army is not generally understood. The Red Cross is not a private society supported by private contributions, but is a governmental body incorporated by Congress, with a definite function, that of giving voluntary aid to the soldiers and sailors of the army and navy during war. It differs from other governmental functions in that it is not supported by congressional appropriations, but by voluntary contributions. Many of its functions and their limitation are defined in international treaties with other nations. Originally conceived to give aid to the sick and wounded in battle, and to place them and the attending medical and nursing personnel safely into a special noncombatant group, its functions have broadened and grown until they ramify, in war time, among civil and military populations alike.

When, two years ago, the war began with us, the popular idea in the army, among the majority of medical and line officers alike, of the full extent of Red Cross duties, seemed to be that the Red Cross workers were to be kept as far in the rear as possible, to hold the little hot hand of the homesick convalescent soldier, and, on off moments, make comfort bags for soldiers and sailors. The idea of the average person eager to go into Red Cross work was to make as many surgical dressings as possible and, with armfuls of these, keep as far forward in the advanced zone as possible, ready to rush on the field of battle and stem the hemorrhages of the wounded and gasping soldiers. Stern reality soon effected a compromise, and time only permits here of a short reference to some of the medical activities in their relation to the army.

The war has shown that the Red Cross has proved an excellent stop-gap for supplies, and a source of all kinds of emergency and surgical supplies and relief, even to complete and extensive hospitalization, when the situation called for them. No more satisfactory and cordial relationships could have existed between two departments than did exist in France between the Medical Department of the Red Cross and the Chief Surgeon's Office of the American Expeditionary Forces. Because of this relationship, the Red Cross was able to supply opportunities to the medical men in France which could not otherwise have been obtained. Through the broad-minded policy of Major Grayson M. P. Murphy, Red Cross Commissioner to Europe, there was formed a research committee, with American, English and French medical men, which fostered research and secured progress in medicine even during the war. The discoveries of the origin of trench fever and its transmission through body lice was the direct result of this. The standardization of blood transfusion, the striking progress of surgery of the chest, and the continuous study of surgical shock are other examples of work accomplished by this same committee. Through the Red Cross Research Society, whose membership consisted of all members of the Medical Corps in France, this research committee furnished a forum in which was discussed and given out the knowledge of medicine and surgery of the war, gathered in the years just previous to our entry. It proved to be the intellectual center for the medical portion of the American Expeditionary Forces, and here, discussion by the Medical Corps of the British and French armies in its meetings, gave to the members of the American Medical Corps the knowledge gained in the hard and cruel experiences of the three years previous to our entrance. It was by this means that the American Medical Corps started with the medical knowledge of 1917 instead of with the knowledge of 1915 or 1916. It thus trained and prepared thousands of officers by reenforcing their practical experience with knowledge of the experiences to come.

The Red Cross also published a medical journal, a digest of all war articles of the Allied countries, and disseminated these broadcast in the American Expeditionary Forces and among the medical corps of our Allies. It further disseminated knowledge by means of a library and a medical intelligence department that furnished, on request, any information regarding scientific subjects. It thus supplied medical knowledge, and prevented medical stagnation and deterioration through lack of knowledge.

One of the unforeseen but logical sequences of the Red Cross Research Society was to establish a liaison with the medical corps of our Allies. Instead of a slow and gradual acquaintance, there arose a rapid amalgamation and a rapid fusion into a frank and trusting friendship between the medical men of France, England and America. This proved to be one of the really valuable contributions which the Red Cross made to the war. Another contribution of great value was the making and furnishing to the army of the nitrous oxid for general anesthesia. Researches with this gas showed that, in the seriously wounded suffering from surgical shock, it did not increase this shock, as chloroform and ether did, nor did it tend to send into shock the seriously wounded. The death rate, with this general anesthetic, was 20 per cent. less among the collapsed and seriously wounded than with the other anesthetics. The Red Cross brought over to France a plant to manufacture this gas; it manufactured it and placed it up in the front hospitals of the advanced zone. The practical proof that such an anesthetic, in huge cylinders, could be carried forward to the advanced hospitals, and used in practical abundance back of the battle lines, was a successful accomplishment. The lives saved justified the expenditures, for its advantages were so definite that its use meant the purchasing of the lives of our wounded.

Another real contribution by the Red Cross, in administrative matters in the war, was the founding of the base hospital organizations on the advice of Gen. J. R. Kean. These organizations brought together from various hospitals groups of medical and surgical men and nurses who were accustomed to work together and who knew each other's ideas and ways of work, and had them fully equipped and prepared for service before war broke out. The Spanish-American War had shown how difficult it was to gather men quickly into efficient organizations with no previous acquaintance which accustomed them to work together. The base hospital units produced a homogeneous structure instead of a heterogeneous mass thrown together by haphazard, and even when members of the hospitals were taken out later and sent as leaders of other units and teams, there still remained the basic continuity, which proved of the greatest value. It is of the utmost importance for future preparedness that the Red Cross should have these base hospital groups ready to go at all times, and nothing should be allowed to stand in the way of this or of some similar plan. As is known, the Red Cross gave up these units to the army as soon as they were called to active duty.

It is a question, and one that should be fully discussed, whether or not it would be advisable for the Red Cross to retain control of the base hospitals in the rear zone of the army. This has been done in Italy, by the Italian Red Cross, with pronounced success, and the chain of hospitals continued up even into the advanced zone; but where they touched the advanced zone they left the control of the Red Cross and proceeded under the control of the army. The Red Cross can often obtain its supplies quicker than the army, and can often act independently in emergencies in which the army must proceed along more slowly acting established lines. The American Red Cross has shown conclusively in France that, with its own or with army personnel, it can furnish, equip, and efficiently run hospitals in the advanced zone, or in the rear as base hospitals. This has proved advantageous in an emergency. Would it not prove equally advantageous as an established policy?

NATIONAL CONTROL OF PREVENTABLE DISEASE

I desire to draw but one more deduction from the medical lessons of this great war, and that in reality is the climax toward which everything points. That is, if this nation, through its present medical knowledge, has within its grasp the power to control communicable, and hence preventable, diseases, there must be established a nation-wide controlling organization for this purpose, a National Department of Health. Over 33 per cent. of our young men were disqualified from the draft for physical defects. There is need of wider supervision of our growing boys and girls to build up a more robust nation, and it is especially urgent in rural districts. If we are to have some form of universal military service, the very necessity of its universality demands some general supervision of the health of the youth of the nation, through protection against the transmissible diseases, and direction over the giving of health to the people as we now give education. This war has taught that there remains economic value in the maimed and wounded, and it is our duty to develop this value to its fullest extent. The maiming and injury of our workers, in the everyday work of industry, far exceeds each year the battle casualties of this war, and there is an economic necessity and duty to be performed in the salvage and reconstruction of the industrially injured.

Malaria still prevents the use of large areas of our southern states, and saps the energy of a large portion of the population. Typhoid fever still rests as a blot on the rural hygiene of this country. The control of epidemics between states is already in the hands of the Public Health Service, and within states, if state authorities request aid. Quarantine from outside infection is also under federal control. There are many other federal activities partially supervising health and disease through the various departments of the federal government. But it all lacks the efficient power of central correlation, and there remain many public health activities that should be undertaken by central action, from some of the problems of infant mortality to the problems of the increase of degenerative diseases of late middle life. It is the duty of the American Medical Association, and of each member of each state association, to urge on Congress the establishment of a National Department of Health.

Hull (England) After-Care Colony for the Tuberculous.—This colony was opened in April, 1918. The first report detailing the history of the movement and work done to Dec. 31, 1918, has just been issued. The colony is intended for such persons as have previously suffered from tuberculosis, in whom the disease is arrested, and who are certified to be noninfectious and able to perform at least six hours of hard work daily. Every applicant undertakes to remain for at least one year, during which time the individual is brought to full earning capacity by a gradual process of training. The work consists of market gardening, fruit growing, intensive horticulture, sheep, poultry and pig raising. The women colonists also assist with light household duties. The rearing of medicinal herbs is also to be attempted during the coming year. The colonists pay a certain sum for their maintenance, but they receive pay for their work.

INTESTINAL PARASITES IN OVERSEAS AND HOME SERVICE TROOPS OF THE U. S. ARMY

WITH ESPECIAL REFERENCE TO CARRIERS OF AMEBIASIS *

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The intermingling of men from the tropics and of troops which had seen service in regions where amebic dysentery is widely endemic with our own troops on the western front during the war has opened possibilities of increased infections by *Endamoeba dysenteriae* and other intestinal parasites. This is especially possible in cases of dust-borne, fly-borne or water-borne infections in which ova or cysts from the stools of infected men find their way into the food or water of troops in the trenches or in the even more exposed conditions attending a rapidly advancing army.

EXAMINATIONS FOR INTESTINAL PARASITES

Examinations of 1,200 men of the United States army who had been in overseas services, and of 300 men from home service troops, have made possible the following preliminary account of the relative degrees of infection in these two groups of men. This work has been carried on at the Army Laboratory, Port of Embarkation, New York, since Dec. 28, 1918. The overseas troops examined were sick and wounded soldiers in transit through Debarkation Hospital No. 3, New York City. They included men who had seen service in Flanders, Château Thierry, the Argonne and Toul regions, as well as quite a number from France who never reached the front. They are drawn from 584 different regiments, etc., and are therefore fairly representative of our overseas troops. They come from every state in the Union and constitute approximately a fair sample of our population. Only a small fraction of them saw service on the Mexican border. It is obviously impossible to determine what proportion of the infections detected in them were acquired overseas and which ones are of home origin.

The home service troops are mainly cooks, bakers and food handlers from the port of debarkation and principally from the Medical Department. Of the total of 300 men examined, eighty-two, or 27 per cent., bear foreign names suggestive of Russian, Polish, Italian or Spanish origin, and at least seven are negroes from Florida. This group, therefore, is less typical of the American troops as a whole than is the overseas group examined by us. They presumably present a higher degree of infection by reason of their origin than would a fair sample of our population.

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* From the U. S. Army Laboratory, Port of Embarkation, New York City, E. H. Schorer, Major, M. C., U. S. Army, officer-in-charge.

* For an amplification of this subject we would refer the reader to an article giving further details of the work done at the New York Army Laboratory, namely: Kofoid, C. A.; Kornhauser, S. I., and Swezy, Olive: Criterions for Distinguishing the Endameba of Amebiasis from Other Organisms, Arch. Int. Med., to be published.

* In the names of the organisms mentioned in this article, I have followed the best biologic usage on the following points: (1) Dysenteriae in place of histolytica as the specific name for the ameba of human amebiasis. This usage will shortly be sanctioned by the Committee on Protozoology of the National Research Council, has recently been approved by the British Academy of Medicine, and is the current French usage. I shall use it in my report to the National Research Council. (2) Trichuris trichiura for Trichocephalus dispar. The latter is displaced by the former in all the best recent parasitologies, and is the legal name for the species. (3) Giardia for Lamblia, for the last-mentioned reasons.

Examinations for ova of intestinal worms were made by the brine-loop method,[1] while that for protozoan cysts was made by the direct smear method, with the use of Donaldson's iodin-eosin stain,[2] supplemented by the concentration method of Cropper and Rowe,[3] substantially as modified by Boeck.[4] Obscure infections have been critically determined by fixed smears stained in iron hematoxylin. The concentration method has added less than 10 per cent. to the infections detected by the direct smear, mainly *Endamoeba coli.*

Only a single examination was made except of thirty-six (3 per cent.) of the men examined from overseas and thirty-two (16.7 per cent.) of the home service troops. In these, two or more samples were secured for examination. In the overseas group, the reexamination of thirty-six patients, with a total of ninety-nine examinations, or 2.75 examinations per individual, increased the number of different infections detected from forty-four to seventy-nine, or from 1.2 to 2.2 per individual. Thus the first examination revealed 56 per cent. of the infections found in 2.75 examinations. In the home service men, the examination of nineteen patients, with a total of sixty-six examinations, or 3.5 examinations per individual, increased the number of infections detected in these cases from thirty-two to fifty-nine, or from 1.7 to 3.1 different infections per individual. In this group the first examination revealed 54 per cent. of the infections found in 3.5 examinations per individual.

This limited finding points in the same direction as the fuller data of Dobell[5] and others in England, where approximately one third of the protozoan infections detected have been found on the first examination. In view of the large percentage of cases in which we have been able to make only one examination, it is highly probable that the total percentage of men infected among those we have examined is considerably higher than our records indicate for the protozoan infections including that of amebic dysentery. If Dobell's[5] ratio is accepted as applicable to our findings, our records of infections by protozoa may be increased approximately threefold if one is to estimate the total extent of the infections really present. The accompanying table presents a summary by numbers and percentage of infections of 1,200 troops from overseas and 300 who have had only home service.

TABULAR SUMMARY OF INFECTIONS BY INTESTINAL PARASITES IN 1,200 OVERSEAS AND 300 HOME SERVICE TROOPS OF THE UNITED STATES ARMY

			Cestodes			Nematodes			Rhizopoda				Flagellata							Misc.	
Source	Total	Negative	Bothriocephalus Latus	Hymenolepis Nana	Taenia Saginata	Hookworm	Trichuris Trichiura	Ascaris Lumbricoides	Endamoeba Coli	Endamoeba Nana	Endamoeba Dysenteriae	Endamoeba Gingivalis	Diendamoeba Fragilis	Trichomonas Intestinalis	Tricercomonas Intestinalis	Waskia Intestinalis	Chilomastix Mesnili	Giardia Intestinalis	Sporozoa—Isospora	Blastocystis Hominis	Iodin Body Phycomycete Spore
CASES OF INFECTION																					
Overseas....	1,200	402	0	7	0	78	72	12	328	325	130	1	1	2	1	3	70	63	6	366	120
Home service.......	300	123	1	0	1	15	6	1	61	92	9	1	1	2	1	4	10	18	2	100	43
PERCENTAGES OF INFECTION																					
Overseas....	1,200	33.5	0	0.6	0	6.5	6	1	27.3	27.1	10.8	0.1	0.1	0.2	0.1	0.3	5.8	5.3	0.5	30.5	10
Home service......	300	40.8	0.3	0	0.3	5	2	0.3	20.3	30.7	3	0.3	0.3	0.7	0.3	1.3	3.3	6	0.7	33.3	14.3

EXTENT OF INFECTION WITH INTESTINAL PARASITES

An inspection of the table shows that the infected men (798, or 66.5 per cent.) are relatively more numerous in the overseas group than among these who have had only home service (177, or 59.2 per cent.), and on computation it appears that overseas men average 1.32 infections by different parasites per man as contrasted with 1.23 infections for those having home service only. This indicates that many of the infections were presumably carried overseas and not acquired there in the first instance, although there is some evidence that many overseas men carry heavier infections than do home service troops. In determining the significance of this slight difference, the sources of the home service men previously referred to should be considered. It may be that the percentages of infections found among them are somewhat higher than they would be in the more representative troops overseas.

The detailed analysis of the data exhibits certain very significant features. In the first place, the men with hookworm infection were all, with two exceptions, one from Italy and one from Massachusetts, from the known area of hookworm occurrence in this country. There is thus no definite indication of acquisition of this infection overseas. The situation is strikingly different with regard to infections by *Trichuris trichiura,* the whipworm. In home service troops there were six infections, or 2 per cent., while in the overseas troops there were seventy-two, or 6 per cent. This threefold increase is all the more significant when allowance is made for the fact that five of these infections were in recent immigrants from Italy (four) and Russia (one). If we deduct these numbers, the percentage of infection in the remaining falls from 2 to 0.3 per cent. Even this percentage is probably not representative of our troops on departure overseas. An examination of 145,016 men in the Southern Department, made by the laboratory car *Metchnikoff,* detected only 162 cases of infections by *Trichuris,* or 0.1 per cent. These men were mainly from Texas and

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[1] Kofoid, C. A., and Barber, M. A.: Rapid Method for Detection of Ova of Intestinal Parasites in Human Stools, J. A. M. A. **71**: 1557 (Nov. 9) 1918.

[2] Donaldson, R.: An Easy and Rapid Method of Detecting Protozoal Cysts by Means of Wet-Stained Preparations, Lancet **2**: 571, 1917.

[3] Cropper, J. W., and Rowe, R. W. W.: A Method of Concentrating Endamoeba Cysts in Stools, Lancet **1**: 179 (Feb. 3) 1917.

[4] Boeck, W. C.: Rapid Method for the Detection of Protozoan Cysts in Mammalian Faeces, Univ. Calif. Pub. Zool. **18**: 145, 1917.

[5] Dobell, C.: Amoebic Dysentery and the Protozoological Investigation of Carriers, British Med. Research Comm. Report 4, 1917.

Oklahoma, but representatives of every state in the Union were included.

Infections by *Trichuris* in 1,200 overseas men were seventy-two, or 6 per cent. This is three times that in the home service group, or eighteen times if known immigrants are excluded, and sixty times that in the large body of representative troops from the Southwest. The greater part of these infections thus appeared to have been acquired overseas. Brumpt[6] observed from 30 to 70 per cent. infections in necropsies and stool examinations at Paris, from 72 to 82 per cent. in the miners of Lorraine and Verdun, and 100 per cent. in central Italy. Infections by Trichuris appear to be quite common in Europe.

The ova of *Trichuris* are discharged in the stools of infected persons; there is no intermediate host, and infections occur, so far as is known, only by mouth, when food or water is contaminated with infected feces. The ova are highly resistant to adverse conditions, and, under control, have been kept alive for five years in the infective stage. Sanitary conditions in rural France, and in the zone of advance on the western front, provide favorable opportunities for contamination of food and water by these resistant ova. The agency of flies in spreading this and other intestinal infections is well known, and the plague of flies at times on the western front during the military activities of the summer of 1918 is a matter of abundant testimony by those engaged therein. This increase in infection by *Trichuris* in overseas troops, as compared with that in home service troops, is an index of some value of the extent and degree of the exposure overseas to fecal contamination of food and water.

The most marked contrast, however, between infections in home service and of overseas troops is seen in the case of infections by *E. dysenteriae*. In the former there are nine infections, or 3 per cent., while in the latter there are 130, or 10.8 per cent., an increase of nearly threefold in the overseas troops over the infections in the home service troops examined by us.

In estimating the significance and value of these results regarding carriers of amebic dysentery, the following circumstances should be considered:

1. In all cases of infection by *Endamoeba nana*, a small tetragenous intestinal ameba of man recently described by Wenyon and O'Connor[7] as *E. nana*, we have differentiated this parasite from *E. dysenteriae* in our findings. It is, as the table shows, a very common ameba in man in both overseas (27.1 per cent.) and home service (30.7 per cent.) troops. There is some evidence in figures in the voluminous earlier literature that this ameba has in some instances been confused with the true dysenteric ameba. The possibility of such confusion renders previous reports of carriers of *E. dysenteriae* in this country and elsewhere tentative and subject to revision. This applies to determinations on both cysts and free amebae, for the former are tetragenous and the latter have ectoplasmic pseudopodia as has *E. dysenteriae*.

2. There has been little, if any, selection of cases for examination. The data represent the average run of the sick and wounded men received at Debarkation Hospital No. 3. They are not, as a rule, dysenteric patients, though many of those carrying cysts of *E. dysenteriae* report one or more attacks of diarrhea or dysentery, in some cases with the sick call and treatment, while on the western front. There are some instances of infection by *E. dysenteriae* with no previous record of intestinal disorder. This is often the case in the infections among home service troops.

3. In only a small percentage of cases has more than one examination been made. Continued examination for six successive days, as recommended by Dobell,[8] would unquestionably increase the number of infections detected. Results in Great Britain indicate that approximately one third of the cases detected on six successive examinations may be detected by experienced examiners on the first examination.

NUMBER OF PARASITES DISCHARGED BY CARRIERS

The presence of these carriers of amebic dysentery constitutes a menace to health in the communities in which they reside, especially where sanitation is neglected and the fly nuisance prevails. The number of cysts discharged daily by a carrier of amebic dysentery varies greatly according to the degree of infection. A patient moderately infected with *E. dysenteriae* was kept under daily examination for forty-two days, and the whole stool was stirred to a uniform suspension and diluted to from 500 to 1,000 c.c. with physiologic sodium chlorid solution. The numbers of cysts of *Giardia intestinalis*, *E. dysenteriae* and *E. coli* were determined in the counting chamber of a hemacytometer and computed for the stool as a whole, with the result that the *E. dysenteriae* cysts were found on twenty-six of the forty-two days in numbers ranging from 330,000 to 45,000,000 per day, averaging 14,520,000 for the twenty-six days, or 8,145,000 for the whole period of forty-two days. Cysts of *Giardia intestinalis* were present on only seventeen of the forty-two days, in numbers varying from 5,000,000 to 3,625,000,000 per stool, and averaging 965,200,000 per day. *E. coli* was much rarer, being found in this case on only three of the forty-two days, with an average of 3,110,000 cysts per day for the three days. The margin of error in these computations is large, but, after due allowance is made for this, the number of cysts discharged from carriers is still large enough to provide for extensive dispersal by flies or other agents. The size of these cysts ranges from 5 to 20 microns in the main, most of them being from 7 to 15 microns in diameter, and they are thus of such volume that they could easily be carried on the feet of the fly. Computations show that from 100 to 150 of the larger cysts, and from 500 to 2,000 of the smaller ones, could be crowded in the area of a fly's foot in a single layer. The agency of flies in such distribution has been suggested by Craig,[9] and experimentally proved by Wenyon.

THE CARRIER PROBLEM

The possibility that the carrier problem in the case of amebic dysentery and other human protozoan infections is a much larger one than hitherto generally recognized is raised by the data here presented. Furthermore, the findings among home service troops are indicative that the endemic area of infection by *E. dysenteriae* in the United States is not confined to the Southern states. This is confirmative of the findings of Smithies[10] and of the earlier findings of Craig.[11]

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[6] Brumpt: Précis de parasitologie, p. 469, 1913.

[7] Wenyon, C. M., and O'Connor, F. W.: Spread and Incidence of Protozoal Infections in British Troops, etc., J. R. Army Med. Corps **28**: 346, 1917.

[8] Dobell: Amoebic Dysentery and Protozoological Investigation of Carriers, British Med. Res. Comm. Rep. 4, October, 1917.

[9] Craig, C. F.: Occurrence of Endamoebic Dysentery in the El Paso District, Mil. Surgeon, March and April, 1917.

[10] Smithies, F.: Frequency of Protozoic Enterocolitis in the Middle West, Am. J. M. Sc. **156**: 173.

[11] Craig, C. F.: The Parasitic Amoebae of War, Philadelphia, 1911.

The presence of distinct size races in *Endamoeba dysenteriae* has been determined by Dobell.[12] Our material shows evidences of similar diversification, but as yet without evidence of the correlation of any particular races with cases in which clinical symptoms of disease have not as yet appeared. Extensive experimental evidence is needed to test the pathogenicity of these various races.

THE LOCAL USE OF ANTIANTHRAX SERUM IN TREATMENT OF ANTHRAX *

JOSEPH C. REGAN, M.D.
BROOKLYN

Various methods of local treatment have been tried in the therapy of anthrax. Among the measures used to destroy the pustule are, (1) excision, (2) the application of chemical or thermal cautery, and (3) the injection of germicides into the region of the pustule—such as tincture of iodin, phenol (carbolic acid), and a solution of mercuric chlorid. All these methods of treatment are objectionable, in that they either cause more or less extensive scar formation, the contraction of which often leads to disfigurement of the part, or are apt to produce toxic or poisonous symptoms, according to the substance injected. Excision has also the additional danger of laying open the blood and lymphatic channels so that symptoms of systemic infection may supervene, and the operation by no means always terminates the local process. Moreover, most of the methods, by their destructive action on the tissues, tend to increase sloughing, retard healing, and subsequently greatly prolong convalescence.

Hence, some method of treatment which does not possess these objectionable features would be desirable providing it proved effective in controlling the infection. Antianthrax serum has been used for some years in the treatment of anthrax, especially in France and Italy. Several authorities have reported a decided lowering in the mortality rate as a result. Thus Sclavo[1] reports a striking fall in the mortality in Italy, from 24 per cent. to 6 per cent., following the use of serum. Encouraging results are also reported from France and England. The serum has been used but little in this country as compared with Europe. The action of the antiserum is little understood, but it has been shown experimentally to possess prophylactic and therapeutic properties in animals (Marchoux[2]). It has always been administered by either subcutaneous, intramuscular or intravenous injection. I could find no record in the literature of its previous use locally.

The following report is therefore made in order to call attention to the satisfactory results of the injection of serum locally around the lesion. Another case of similar character has previously been reported.[3] The modus operandi of the serum is rather difficult to explain at the present time, as so little is known of the type of antibodies which it contains. However, clinically the method was followed by unusually rapid improvement and by recovery of the two patients treated. It possesses none of the disadvantages of the previous methods of local treatment, and for this reason should be preferable providing that future reports continue to establish its value. It is of considerable importance that a recently prepared serum be used, one that is not more than six months old. It must be remembered, of course, that no local treatment can be effective if a blood infection exists, and for this reason additional serum should always be given, either by intramuscular or intravenous injection depending on the severity of the case. However, there can be little doubt that proper local measures, if used early in the disease, will reduce to a minimum the chances of an anthrax septicemia.

REPORT OF CASE

A man, aged 19 years, was admitted to the Kingston Avenue Hospital, Dec. 30, 1918, with a diagnosis of anthrax.

History.—His family and previous history were irrelevant to his illness. He was not addicted to any kind of alcoholic beverage, nor did he smoke, and there was no history of venereal disease. For the previous eight months the patient had been working in a factory in which hair brushes of various kinds were manufactured. His work had been mostly sweeping up the floor, handling hair, etc. On Friday, Dec. 27, the patient noticed a small red pimple on his cheek. It was not very painful and gave him no particular trouble. On the following day he began to feel more discomfort; the cheek began to swell considerably and he could not lie on that side owing to the pain in his neck. He visited a private physician, who advised him to go to the hospital for treatment.

Physical Examination.—On entrance, the patient was rather ill and somewhat irrational. He answered questions poorly, and could remember little of the manner of onset of his illness. On the left cheek there was a considerable swelling. The center of the swollen area was occupied by a pustule, which was elevated above the surrounding tissue and measured almost 3 cm. in diameter. The inner part of the pustule was comprised of a black depressed eschar, which was of a rather leathery and gummy consistency, and was so adherent to the surrounding tissue that it could not be removed. Around this central eschar there was a white elevated border, the "blanched zone," and this, in turn, was encircled by a red areola. At the outer margin of the eschar there were a number of small elevations resembling vesicles, which discharged continuously a serous secretion, giving the entire pustule a peculiar, moist appearance. The tissues immediately around the pustule were very edematous and infiltrated, the swelling extending downward to the angle of the jaw and inward to the left eye, causing such marked edema of both lids that the eye could not be opened. The edematous area was not particularly sensitive; it did not pit on pressure and was not of a hard consistency.

General examination of chest and abdomen failed to show any very definite pathologic condition with the one exception that the heart sounds at the apex were of rather poor quality. The reflexes were normal in response. The temperature, on admission, was 100, pulse 92 and respirations 24.

Clinical Course.—Smears and cultures were taken on admission from the secretion of the vesicles and from the base of the pustule, by lifting up as far as possible the margin of the eschar. A blood culture was also taken. On the following day, December 31, the smears and cultures having proved positive for anthrax, a needle was inserted into the skin at the margin of the red areola, being directed fairly deeply into the subcutaneous tissues at the base of the pustule; it was then connected with a syringe and 12 c.c. of antianthrax serum was injected very slowly into these tissues in such a way as to almost circumscribe the pustule, the needle being of necessity inserted at three different points around the lesion. Thirty c.c. of antianthrax serum were also injected intramuscularly into the buttocks. That night the temperature rose to 102 and the pulse to 110, evidently owing to a serum reaction.

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[12] Dobell: Diverse Races of Entamoeba Histolytica Distinguishable by the Dimensions of Their Cysts, Parasitology **10**: 320 (April 18) 1918.

* From the Kingston Avenue Hospital for Contagious Diseases, Department of Health, City of New York.

[1] Sclavo, quoted by Park, W. H.: Forchheimer's Therapeusis of Internal Diseases, **2**: 332.

[2] Marchoux, E.: Serum Anticharbonneux, Compt. rend. Soc. de biol. **2**: 710, 1895.

[3] Regan, J. C., and Regan, C.: Am. J. M. Sc. **157**: 782 (June) 1919.

Jan. 1, 1919, the patient was somewhat improved. There was a slight extension of the edema in the tissue surrounding the pustule, and there was a rather profuse discharge of serous fluid from the vesicles, but the patient was brighter and decidedly rational. The local injection of 10 c.c. of antianthrax serum and 30 c.c. intramuscularly was repeated.

The morning of January 2, the temperature had fallen to normal and the patient was greatly improved. He was sitting up and stated that he felt very much better. The pustule was drying up, both the red inflammatory areola and the white zone having disappeared. The centered eschar appeared depressed, the vesicles had almost dried up and the surrounding edema was greatly reduced in degree and in extent, the patient being able to open his eye. The lymphatic glands at the angle of the jaw were definitely enlarged. As the lesion had so much improved, no further injection of serum was given, the lesion being merely covered by a wet dressing of antianthrax serum.

January 3, the improvement was progressive and marked. The central eschar was beginning to loosen up at the margins, where it could be lifted off from the underlying tissues, but was intimately attached at the center of the lesion. The surface beneath presented the appearance of healthy granulations. The pustule was rapidly drying up, and the surrounding edema had practically disappeared. The cervical glands at the angle of the jaw had swollen to the size of a small marble. An injection of 10 c.c. of serum was made into the region of these enlarged glands. Cultures were again taken from the lesion.

January 4, the patient's condition was very good. He was then up and around. The pustule was reduced almost to half its original size, consisting only of the small, black eschar. The swelling of the glands had greatly diminished. The temperature continued normal.

January 17, the wound was almost healed. There was a small, dark, thin crust over its central portion. The crust was intimately attached by an elastic and fibrous pedicle to the subcutaneous tissues beneath, and had the appearance of a piece of burnt leather. The glands at the angle of the jaw were still slightly enlarged.

January 19, the crust was removed. The base of the pustule was touched up with tincture of iodin, and the patient was discharged, evidently entirely recovered.

February 25, the patient was seen again. He was in very good health, and there was no evidence of any detrimental effect due to the recent attack. At the site of the pustule there remained only a small, circular scar, somewhat depressed below the surrounding skin.

Pathologic and Bacteriologic Findings.—Blood counts revealed: December 31: total leukocytes, 16,400; polymorphonuclears, 76 per cent.; lymphocytes, 22 per cent.; transitionals, 2 per cent. January 1: total leukocytes, 15,000; polymorphonuclears, 78 per cent.; lymphocytes, 19 per cent.; mononuclears, 2 per cent.; eosinophils, 1 per cent. Blood cultures were taken December 30 and 31, and both remained sterile. Smears made from the pustule, December 30, revealed pus cells and a rather large number of bacilli, gram-positive, long, square at the end and rough in outline. Cultures on agar plate in twenty-four hours showed two types of colonies, several being rather large, from 4 to 5 mm. in diameter, dry and opaque, and of whitish color with scalloped borders; and the others more numerous, smaller, from 1 to 2 mm. in diameter and grayish color. On microscopical examination the smaller colonies showed staphylococci. The larger colonies were found to be composed of gram-positive bacilli, single and in chains, very similar to those found in the direct smears. Hanging drop showed the bacillus to be nonmotile.

The large colonies, evidently anthrax, were transplanted to plain agar for further study and for animal inoculation. These transplants were examined two days later and revealed the same dry, opaque colonies with fringing projections so common in anthrax. On low magnification the colonies resembled a head of hair. The same gram-positive bacillus, previously noted, was found on smear, this time in pure culture. After several days later smears showed spores of an elliptical shape, one in each bacillus.

Animal Inoculation.—An emulsion was made in broth of the pure growth obtained. Then 10 drops of this emulsion were injected into a mouse at the root of the tail. The animal died suddenly twenty-one hours later, having been apparently in fair condition in the interval.

Smears from the site of inoculation and the internal organs showed the same large gram-positive bacillus. Likewise cultures presented typical colony characteristics and showed the anthrax bacillus on smear.

January 3, a culture was again taken from the lesion. It showed no anthrax bacilli. Only staphylococci were found. On the 9th the same procedure was repeated with the same result.

CONCLUSIONS

1. The local measures now used in the therapy of anthrax, such as excision, cauterization, injection of germicidal solutions into the immediate region of the pustule, are all objectionable either in that they cause extensive scar formation with subsequent disfigurement, or are apt to produce toxic or poisonous symptoms.

2. The injection of antianthrax serum[4] into the tissues surrounding the pustule, while possessing none of the disadvantages of the previous methods of local treatment, has a very rapid and complete effect on the pustule, not only in arresting its further development, but also in producing a subsidence of all local inflammatory symptoms.

3. The injection is made with an antitoxin needle and syringe, the needle being inserted just outside the margin of the lesion and directed toward the subcutaneous tissues at the base of the eschar. The needle may have to be introduced at three points in order to encircle the pustule. The serum is introduced very slowly, the dosage varying from 10 to 15 c.c. It was administered once daily till the local process was controlled, usually two or three injections being sufficient.

4. Local measures must also be accompanied by suitable general treatment; hence serum should also be given either intramuscularly or intravenously.

5. Local treatment in order to effect a cure must anticipate the onset of an anthrax septicemia.

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[4] The antiserum used was furnished on request by the chief of the Bureau of Animal Industry, Department of Agriculture, Washington, D. C. I wish to express my thanks for the cooperation of this bureau and its promptness in sending the antiserum.

Against Unethical Advertising.—The *Gazetta degli Ospedali* relates that the Ordine dei Medici of Palermo, Italy, recently passed resolutions to the effect that the notices published by physicians in the daily papers must be of uniform style and bear the heading "Notice Approved by the Ordine dei Medici. Also that a placard denouncing blatant advertising—the placard to be supplied by the organization—should be displayed in physicians' offices, sanatoriums, etc., and also in drug stores, railroad stations and cars and in hotels. A special permanent committee was also appointed, to comprise eleven members, whose task is to watch over the enforcement of these regulations and of others that may be adopted, aiming to secure the cooperation of the municipal authorities to combat abuses, and possibly secure the revocation of the license to practice in case of flagrant offenses. The funds for the purposes outlined are to be collected from those specially interested. The committee will seek by circulars, etc., to educate the public to the moral and material importance of this campaign against "indecorous advertising."

SOME CLINICAL OBSERVATIONS ON THE INFLUENZA EPIDEMIC AT CAMP UPTON

FROM SEPT. 13 TO DEC. 1, 1918

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It is not our purpose, in offering this brief contribution, to analyze the epidemic as seen at Camp Upton in its many complex relations, epidemiologic, etiologic, bacteriologic, pathologic and clinical. It would be duplication and reduplication to add another such report to the many admirable ones that have already appeared in the journals. The disease at Camp Upton resembled closely the disease in other camps, being part of a general pandemic, sweeping widely and rapidly, and varying only in detail in camps similarly constituted. The bacteriology and etiology of the disease were carefully studied at Camp Upton, but the study yielded no conclusions of value. But we desire to present the basic clinical statistics for record, to make a few comments thereon, and in particular to describe in more detail than we have seen described the criteria and methods of diagnosis of the secondary bronchopneumonia following influenza.

ORIGIN AND NATURE OF EPIDEMIC

The epidemic of influenza was imported into Camp Upton, N. Y., directly from Camp Devens, Mass., by the transfer of troops bound overseas. It began abruptly on Sept. 13, 1918, with the admission to the base hospital of thirty-eight cases. Thereafter it increased rapidly, reached its apex, October 4, with the admission of 483 cases, then declined abruptly until October 22, when only eleven new cases were admitted. The primary epidemic covered a period of forty days (from September 13 to October 22, inclusive), with the admission to hospital of 6,131 cases.

Following the primary epidemic, cases of true influenza continued to appear irregularly for a considerable period, but in moderate number only. We regarded cases occurring between October 23 and the end of November as constituting the late or secondary epidemic. There was a total of 816 admissions in this period, contributed chiefly by new arrivals in camp or by groups of individuals from organizations previously protected by successful quarantine.

After November, cases of undoubted influenza became more and more rare, but cases of infectious tonsillitis and sore throat more frequent. So frequent, indeed, were such cases that they constituted a mild epidemic which has continued to the present time (April 1, 1919). The differentiation of these cases from true influenza was often difficult or even impossible, individually. But when taken as a group or as a whole it seemed clear that they were not simple influenza but a peculiar form of infectious tonsillitis or sore throat.

Their general features resembled closely those of influenza—marked infectiousness, abrupt onset, chilliness, high temperature, headache and backache, flushed face, injected and glassy conjunctivae, cough and throat symptoms. The throat showed congestion, redness, sometimes slight edema of the uvula, and in the majority of cases special involvement of the tonsils. These were usually congested, swollen in varying degree, and in particular smeared over with one or more patches of a very thin, delicate membrane which was readily removed by swab. Occasionally the membrane was extensive, thick, dense and adherent. Diphtheria and Vincent's disease could be excluded by bacteriologic examination. Infrequently, a true follicular tonsillitis was exhibited. Rarely, peritonsillar abscess developed. In many instances on casual and first examination the tonsils did not appear to be specially affected beyond sharing the congestion of the throat in general. But repeated and exact examination with strong light usually convinced one that the tonsils were specially involved and most frequently exhibited some grade, if only slight, of the membranous deposit above described. Many doubtful and atypical cases were observed. Bronchopneumonia and empyema were the chief complications but occurred far less frequently than with true influenza. No organism was found that could be surely incriminated as the cause of this throat infection. The *Streptococcus hemolyticus* was recovered in a considerable proportion of the cases but was not constant.

We have evidence of the prevalence of a similar throat affection at such widely separated points as Boston and Buffalo and many other places, and we would direct attention to this affection in relation to late statistics of the epidemic of influenza, as tending to vitiate their value. In consequence we have drawn a line at November 30 in terminating the period of the secondary epidemic of influenza at Camp Upton, regarding all diagnoses of influenza thereafter as unreliable and generally confused with the throat affection prevailing. Indeed, it would be safer to terminate the epidemic of influenza earlier for the purpose of statistical study.

The clinical characteristics of the influenza and its complications as seen at Camp Upton were the counterpart of the disease as seen at Camps Dix, Mills, Merritt and other camps in the northeastern section of the United States, as acknowledged by representatives from these camps who visited our wards during the height of the epidemic. Probably the disease was more or less similar everywhere, but varied in special features and intensity in different places, as would be expected. The disease at Camp Upton was equal in intensity and virulence to that at the other neighboring camps mentioned. The impression received in going through our pneumonia wards (holding at one time about 900 patients) was one of horror at the frightfulness of the sight of the hopelessly sick and dying and at the magnitude of the catastrophe that had stricken wholesale the young soldiers prepared to face another enemy but helpless before this insidious one. The memory of this sight will haunt for life the minds of those who saw it.

STATISTICAL TABLES AND CHARTS

The accompanying tables and graphic charts based on these tables give the main statistical data of the epidemic of influenza at Camp Upton. The figures are all from official sources. The figures for influenza are for patients actually admitted to hospital. In addition there were numerous cases of influenza of milder type in which the patients were not admitted to hospital and were not enumerated and in consequence are not included in these statistics. Their number is unknown but believed to be large. The figures for pneumonia are as accurate as diagnostic criteria permitted, and special precautions were taken to secure the complete reporting and enumerating of all cases of pneumonia. The figures for deaths are absolutely accurate. A special statistical office was maintained by the medical service from the beginning of the epidemic to keep full and accurate records, and in consequence we believe that our figures from the base hospital are exceptionally complete and reliable.

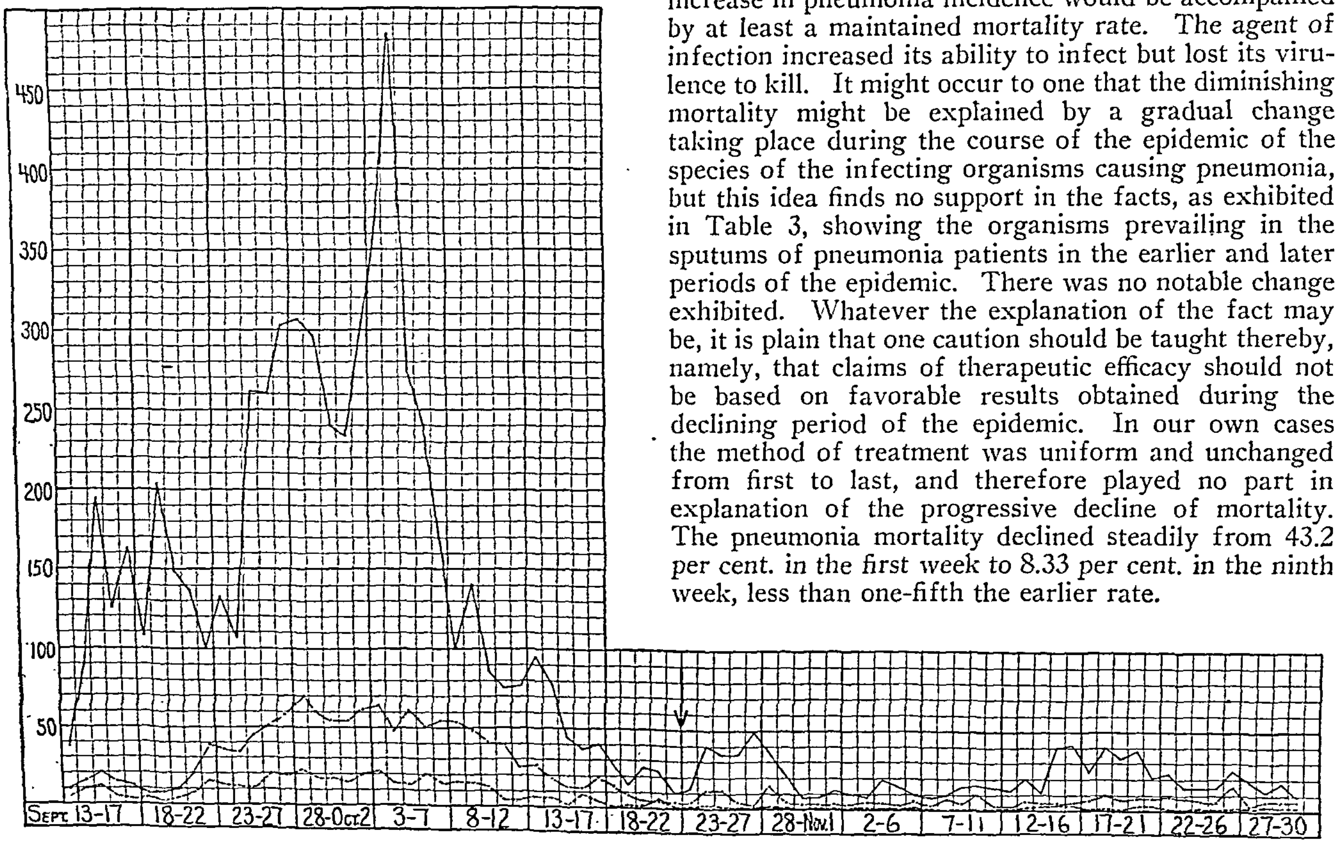

Chart 1 (illustrating Table 1).—Number of admissions for influenza by day, number of each day's cases of influenza in which pneumonia later developed, and number of each day's cases of influenza in which the patients ultimately died (up to Jan. 1, 1919): solid line, influenza; line of dots and dashes, pneumonia; broken line, deaths; the arrow indicates end of primary epidemic.

In compiling the tables, giving figures day by day, we have arranged the columns so as to show, by reading laterally, later complications (pneumonia, empyema) and ultimate deaths for each separate day's admissions of influenza patients, followed up to Jan. 1, 1919. This arrangement permits an accurate comparison of the later course and the end-results of each separate day's group of cases of influenza throughout the epidemic and followed over a period of almost two and a half months subsequent to the termination of the primary epidemic. So far as we have observed, this method of statistical report has not been employed heretofore in the published reports on the epidemic from other military camps. Prolonging the period of observation manifestly increases the mortality figures by including late ultimate deaths.

A fact of interest is brought out strikingly by reducing to graphic form in Chart 2 the figures of Table 2, showing the percentage of influenza cases that developed secondary pneumonia and the percentage of such secondary pneumonia that resulted in ultimate death, progressively, week by week, throughout the epidemic. It is thus seen that with the course of the epidemic there took place a progressive increase in the percentage of pneumonia incidence and at the same time a progressive decline in the percentage of pneumonia mortality. It would be interesting to know whether a similar relation was shown in other camps. It would also be of interest to know the explanation of these conflicting tendencies. Why did a steadily increasing proportion of influenza cases develop secondary pneumonia, and why did this increasing pneumonia incidence result in a decreasing pneumonia mortality? One might reasonably suppose that a tendency to increase in pneumonia incidence would be accompanied by at least a maintained mortality rate. The agent of infection increased its ability to infect but lost its virulence to kill. It might occur to one that the diminishing mortality might be explained by a gradual change taking place during the course of the epidemic of the species of the infecting organisms causing pneumonia, but this idea finds no support in the facts, as exhibited in Table 3, showing the organisms prevailing in the sputums of pneumonia patients in the earlier and later periods of the epidemic. There was no notable change exhibited. Whatever the explanation of the fact may be, it is plain that one caution should be taught thereby, namely, that claims of therapeutic efficacy should not be based on favorable results obtained during the declining period of the epidemic. In our own cases the method of treatment was uniform and unchanged from first to last, and therefore played no part in explanation of the progressive decline of mortality. The pneumonia mortality declined steadily from 43.2 per cent. in the first week to 8.33 per cent. in the ninth week, less than one-fifth the earlier rate.

A few clinical features of the epidemic may be mentioned specifically:

The treatment of influenza was purely symptomatic. No vaccines or serums were used either for prophylaxis or treatment.

The mortality from influenza (all caused by secondary pneumonia and its complications and sequelae), calculated up to Jan. 1, 1919, was: for the period of the primary epidemic (from September 13 to October 22, inclusive), 6.58 per cent; for the period of the late or secondary epidemic (from October 23 to November 30, inclusive), 4.18 per cent.; for the whole period of the primary and secondary epidemics (from September 13 to November 30, inclusive), 6.30 per cent.

TYPE OF DISEASE

There was only one type of influenza seen, namely, the respiratory type. The nervous, the gastro-intestinal, and the febrile types, commonly described in previous epidemics, were conspicuous by their absence as special types. Nervous manifestations were prominent but always were associated with respiratory symptoms. Meningitis occurred in only one case, secondary to pneumonia (pneumococcus Type IV). Meningismus simulating meningitis occurred in a few cases, always in association with pneumonia except in one uncomplicated case of influenza. The cell count of the spinal fluid in meningismus was normal. Severe gastro-intestinal symptoms were infrequent or rare. In only occasional cases was there marked abdominal pain, in a few instances associated definitely with acute or subacute appendicitis. Taking the cases as a whole, we found that complications were infrequent with the notable exception of the one predominant complication, pneumonia, and its sequelae.

Recurrent or secondary attacks of influenza were very rare, most instances of supposed recurrent attacks in reality being attacks of the previously mentioned infectious tonsillitis and sore throat, which led to many errors of diagnosis. Secondary rises of temperature of short duration, within a day or two after primary defervescence, occurred occasionally without complication, but were always regarded as presumptive evidence of the onset of bronchopneumonia and this presumption was almost invariably confirmed by the subsequent course if the secondary rise of temperature continued beyond twenty-four hours or was not explained by other manifest complication.

Secondary bronchopneumonia, with its complications and sequelae, was the sole cause of death in the influenza epidemic. The mortality for pneumonia (including its complications and sequelae) secondary to influenza, calculated to Jan. 1, 1919, was as follows: for the primary epidemic (from September 13 to October 22, inclusive), 31.19 per cent; for the late or secondary epidemic (from October 23 to November 30, inclusive), 14.71 per cent; for the whole period of the primary and secondary epidemics (from September 13 to November 30, inclusive), 28.70 per cent. All delayed deaths occurring up to Jan. 1, 1919, are included in the above figures.

TREATMENT

The treatment of pneumonia was not changed throughout the epidemic. No vaccines were used and serums only in a few cases in which the sputum typing revealed infection with pneumococcus Type I.

All patients with pneumonia from the beginning to the end of the epidemic (and since that time up to the present) were given tincture of digitalis in substantial doses, larger than commonly employed. The usual single dose was a dram or a dram and a half, repeated three times daily until from five to six doses were given within a period of from thirty to thirty-six hours, the medication being started as soon as the diagnosis of pneumonia was positive, probable or even

TABLE 1.—DAILY ADMISSIONS OF INFLUENZA PATIENTS, NUMBER BY DAYS OF THOSE LATER DEVELOPING PNEUMONIA, PNEUMONIA FOLLOWED BY EMPYEMA, AND ULTIMATELY DYING (CALCULATED UP TO JAN. 1, 1919) AND NUMBER OF DEATHS LISTED BY DAY OF DEATH *

		No. of Influenza Patients				
		Admitted by Days	Later Developing Pneumonia	Later Developing Pneumonia Followed by Empyema	Ultimately Dying (All from Pneumonia)	Deaths Listed by Day of Death
Sept.	13	38	10	1	4	0
	14	86	14	1	9	0
	15	193	21	0	11	0
	16	124	14	1	4	0
	17	161	13	0	3	0
	18	107	7	1	5	0
	19	201	9	0	2	1
	20	149	11	0	5	0
	21	138	21	0	9	5
	22	101	40	1	15	5
	23	132	37	0	13	5
	24	105	35	1	12	3
	25	262	47	0	12	9
	26	200	51	0	20	7
	27	302	58	0	19	8
	28	306	70	0	23	6
	29	296	59	1	17	14
	30	239	54	0	17	13
Oct.	1	233	51	2	14	8
	2	298	62	1	20	14
	3	363	64	0	22	16
	4	483	48	0	15	21
	5	274	62	1	14	22
	6	241	49	0	21	17
	7	157	56	0	15	11
	8	101	54	2	16	25
	9	139	49	0	16	19
	10	92	41	2	12	18
	11	76	39	0	3	24
	12	77	24	1	4	27
	13	96	27	1	7	13
	14	79	19	0	6	9
	15	44	13	1	1	10
	16	36	12	0	9	12
	17	39	19	0	4	10
	18	27	13	0	0	5
	19	14	8	0	1	6
	20	27	4	0	1	5
	21	24	4	0	3	3
	22	11	3	0	0	2
	23	13	3	0	0	5
	24	40	12	0	2	2
	25	35	12	0	1	2
	26	35	4	0	0	4
	27	49	1	0	0	0
	28	35	15	0	1	3
	29	17	4	0	1	1
	30	8	2	0	0	0
	31	8	3	0	1	0
Nov	1	12	3	0	0	1
	2	10	2	0	1	0
	3	7	5	0	1	0
	4	19	3	0	0	0
	5	16	2	0	0	1
	6	10	7	0	1	0
	7	8	1	0	0	0
	8	10	8	0	0	2
	9	16	4	1	0	2
	10	17	10	1	0	0
	11	15	2	1	0	1
	12	13	1	0	0	1
	13	21	6	0	1	0
	14	11	5	0	2	0
	15	40	5	0	4	0
	16	42	5	1	3	0
	17	25	7	0	0	0
	18	40	10	1	1	1
	19	32	7	0	0	0
	20	38	8	0	2	2
	21	21	8	1	2	1
	22	23	9	0	0	1
	23	16	8	0	0	1
	24	16	7	0	1	2
	25	16	6	0	0	0
	26	26	15	1	1	0
	27	19	2	0	1	4
	28	11	6	0	3	1
	29	18	7	0	2	3
	30	8	6	2	2	1
Sept. 13-Nov. 30, inclusive........		6,947	1,526	27	438	429
Sept. 13-Sept. 30, inclusive........		3,200	571	7	200	90
Oct. 1-Oct. 31, inclusive..........		3,171	780	11	210	314
Nov. 1-Nov. 30, inclusive..........		576	175	9	28	25
Sept. 13-Oct. 22, inclusive (period of primary epidemic)..........		6,131	1,295	18	404	387
Oct. 23-Nov. 30, inclusive (period of secondary epidemic)..........		816	231	9	34	42

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* The last column represents the number of deaths listed by day of death, irrespective of the day of origin of the influenza resulting in death. The second, third and fourth columns should be read with reference to the first column, being arranged to show the number of cases of influenza of corresponding date that resulted at any subsequent date, up to Jan. 1, 1919, in pneumonia, pneumonia and empyema, or death. This arrangement indicates, by reading the columns crosswise, the subsequent complications and outcome of each day's admissions of influenza patients. It will be observed that this method of presenting the statistics of the epidemic differs from the method commonly followed, namely, the mere listing of influenza, pneumonia and deaths by date of occurrence. The method here used appears to be the logical method, pursuing daily admissions of influenza through their entire subsequent course and complications to their final outcome by cure or death. It is of little statistical value to know merely how many cases of pneumonia or death happened to fall on certain days in the epidemic, but it is of great statistical value to pursue daily admissions of influenza patients through their subsequent course and thus to establish the comparative degree of severity of the epidemic at different stages in its progress.

likely. The patients received, therefore, from 300 to 500 minims, average about 350 or 400 minims, of the tincture, representing one-tenth strength of the crude drug. As a result of this large dosage we saw very few instances of bradycardia below 60 per minute or of recognizable arrhythmia, though caution was observed in following the pulse of every patient. Having employed these large doses of digitalis in the treatment of approximately 2,000 cases of pneumonia of different types during the past seven months, we feel justified from our experience in emphasizing the conviction that they are not dangerous or likely to produce serious disturbance of the heart, at least in the class of patients that we have treated, that is, selected young men of military age, generally with sound vital organs. On the contrary, our belief is firm that these large doses of digitalis are well tolerated in pneumonia, and that they slow and strengthen the heart action and save lives. When death impends, the pulse usually maintains a good quality almost to the end. Whether patients of more advanced years with impaired vital organs would respond so favorably to similar treatment we are not justified in assuming, but observing proper caution, we would have little hesitation in treating them similarly. In addition to digitalis the treatment employed was symptomatic.

DIAGNOSIS OF PNEUMONIA

As previously stated, all deaths following influenza were attributable to secondary pneumonia and its complications and sequelae (empyema, pericarditis, meningitis, etc.). Pneumonia, therefore, was the one danger that threatened life. As pneumonia developed in over one fifth of all cases of influenza, and killed almost one third of those it attacked, its early recognition was imperative if therapy was to possess any value.

TABLE 2.—PERCENTAGE OF PATIENTS ADMITTED FOR PRIMARY INFLUENZA WHO SUBSEQUENTLY DEVELOPED PNEUMONIA, COMPARED WITH THE PERCENTAGE OF PNEUMONIA MORTALITY AND GROSS INFLUENZA MORTALITY RESULTING FROM CORRESPONDING GROUPS OF CASES; ABSTRACTED FROM TABLE 1*

Week	No. of Influenza Patients Admitted	Influenza Patients Later Developing Pneumonia		Ultimate Deaths (All from Pneumonia)	Percentage Resulting in Ultimate Death	
		Number	Per Cent.		Pneumonia	Influenza
Sept. 13-19..........	910	88	9.6	38	43.2	4.17
Sept. 20-26..........	1,147	242	21.1	86	35.5	7:5
Sept. 27-Oct. 3......	2,037	421	20.66	132	31.35	6.48
Oct. 4-10............	1,487	359	24.14	109	30.64	7.33
Oct. 11-17...........	447	153	34.23	34	22.22	7.6
Oct. 18-24...........	156	47	30.13	7	14.9	4.5
Oct. 25-31...........	187	41	21.92	4	9.75	2.14
Nov. 1-7.............	82	23	28.05	3	13.04	3.65
Nov. 8-14............	103	36	34.95	3	8.33	2.91
Nov. 15-21...........	238	50	21.0	12	24.0	5.04
Nov. 22-28...........	127	53	41.73	6	11.32	4.72
Nov. 29-30 (2 days)	26	13	50.0	4	30.76	15.38
Sept. 13-Nov. 30, inclusive.........	6,947	1,526	21.96	438	28.70	6.30
Sept. 13-Oct. 22, inclusive (period of primary epidemic)...........	6,131	1,295	21.12	404	31.19	6.53
Oct. 23-Nov. 30, inclusive (period of secondary epidemic)...........	816	231	28.30	34	14.71	4.16

* Note the general tendency, with the progress of the epidemic for the percentage of pneumonia incidence to increase and of pnumonia and influenza mortality to decrease.

The early diagnosis of the kind of bronchopneumonia seen during the epidemic was a severe test of the training, judgment and patience of those responsible. The criteria brought from civil practice had to be unlearned and other standards adopted. To be sure, cases with outspoken physical signs and symptoms did occur, but they were conspicuous by their infrequency. The patients in general presented few of the usual symptoms and signs of frank pneumonia. Wretchedly sick and prostrated from the primary influenza, they either progressed continuously and insidiously from influenza into pneumonia, or after the interval of a day or perhaps a few days of convalescence from influenza, a recurrence of high temperature and general symptoms of illness occurred and pneumonia was established. With the absence or paucity of physical signs in the chest, pneumonia was suspected or diagnosed on the basis of this suggestive order of events: A high or irregular temperature continued over more than the usual three or four days of influenza generally indicated pneumonia; a high temperature that recurred and continued for more than one day after defervescence from influenza also usually meant pneumonia, unless clearly explained by other known complications. We learned to be guided to the diagnosis of pneumonia by the appearance of the temperature chart and this guide seldom led astray.

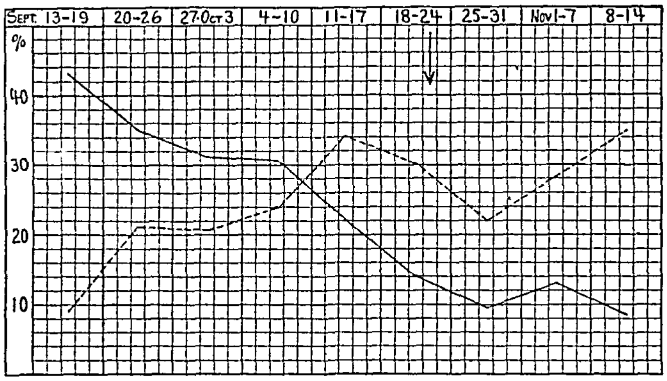

Chart 2 (illustrating Table 2).—Percentage of cases, week by week, admitted for primary influenza, in which cases pneumonia subsequently developed, compared with the percentage of pneumonia mortality from the corresponding groups of cases: broken line, percentage of influenza patients developing pneumonia; solid line, percentage of pneumonia cases resulting in death; the arrow indicates end of primary epidemic, Oct. 22, 1918.

The patient looked sick and suggested a serious condition. His pulse and respiration rates were low relative to temperature and offered not much help in diagnosis. The patient had no grunting or stertorous respiration. He breathed quietly, softly. He had no pain in the chest or it was slight. His nostrils did not dilate in breathing, and he had no telltale herpes about the lips or face. His face was often cyanotic, sometimes ashy, sometimes just pinched looking. He expressed no pain or suffering. If his mind was clear he expressed a sense of euphoria, or of unnatural unrealization of his condition, which in particular marked the advanced stages of the disease. There was a striking tendency toward mental hebetude, drowsiness, wandering and delirium. All of these mental features increased with the progress of the disease. The leukocyte count was usually low, below 10,000, and failed as a guide.

In making the early diagnosis of pneumonia, then, we were guided first by the criteria above described, of temperature, general appearance and condition in relation to preceding influenza.

The physical signs of pneumonia in the earlier stages were either lacking, slight or equivocal. This cannot be emphasized too strongly and especially to civil practitioners, who have not had the exceptional opportunity offered in the military hospitals of studying this type of pneumonia in hundreds and thousands of cases. Nor have we seen this fact sufficiently presented, although usually referred to, in the reports on the epidemic published in the journals from the great military hospitals and camps.

In examining the chest for physical signs of pneumonia we learned to save time and patient by omitting percussion or reserving it to the last. It was the most unreliable of all signs. We proceeded directly to a hasty auscultation of the vocal fremitus of the back of the chest and found this gave the most constant evidence of localization, usually by mere intensification of normal vocal fremitus. If a distinct bronchial or nasal quality were added to the intensified vocal fremitus, which was the exception in the early stages, the diagnosis was fairly secure.

Our next procedure was to auscultate the forced breathing sounds of the entire back of the chest or that portion only in which localization of increased vocal fremitus had been found. Bronchial or bronchovesicular breathing was usually absent or perhaps suggestive but doubtful. In the exceptional case only was it unequivocal. The rule was to find only some degree of intensification of normal breathing, which left one in doubt as to its significance. Later true bronchial breathing was usually found, but seldom in proportion to the involvement of the lungs.

TABLE 3.—RESULT OF EXAMINATION OF SPUTUMS IN PNEUMONIA CASES

Organisms Found by the Avery Cultural Method *	Period of Primary Epidemic, Sept. 13-Oct. 22, Inclusive		Period of Secondary Epidemic, Oct. 23-Nov. 30, Inclusive		Period of Entire Epidemic, Sept. 13-Nov. 30, Inclusive	
	No.	%	No.	%	No.	%
Pneumococcus Type I	16	2.0	2	1.4	18	1.9
Pneumococcus Type II	26	3.4	0	0.0	26	2.8
Pneumococcus Type II (atypical)	38	4.9	4	2.8	42	4.6
Pneumococcus Type III	62	8.0	8	5.5	70	7.7
Pneumococcus Type IV	449	58.6	93	64.1	542	59.5
Penumococcus Type IV and streptococcus hemoliticus	11	1.4	10	6.9	21	2.3
Streptococcus hemoliticus	82	10.7	8	5.5	90	9.9
Streptococcus muc.-cap.	3	0.4	0	0.0	3	0.3
Streptococcus nonhem.	55	7.2	10	6.9	65	7.1
B. influenzae †	12	1.5	5	3.4	17	1.8
Staphylococcus	12	1.5	5	3.4	17	1.8
Total	766		145		911	

* Where two or more organisms were found only the more virulent one is included in the table.

† Bacillus influenzae was found with greater frequency as the technic was improved and as greater care was taken in searching for it. Except in the cases given in the table it was always associated with other organisms, notably pneumococcus Type IV. Toward the end of the epidemic it was recovered in 38 per cent. of cases.

Next we asked the patient to cough deeply while we auscultated the area of suspicion. This often but not always brought out a localized cluster of fine râles. In some cases such sharply localized groups of râles were the only sign at a single examination.

The three signs of localization were, then, in order of importance and frequency: (1) increased vocal transmission, with or without bronchial quality; (2) clustered fine râles, especially excited by coughing; (3) intensification of normal breath sounds, with or without the addition of bronchial or bronchovesicular quality. The degree of prominence of any one of these signs and the degree of combination of more than one of them in the same area determined the degree of value to be attached to the signs as evidence of pneumonia. It was remarkable how often all signs were absent at a single examination or how often some single sign only was present in such minor degree as to be unconvincing of its significance. But by experience we learned how to piece together the general symptoms and the minor localizing signs into a probable or fairly secure diagnosis, to be confirmed by subsequent examinations in the course of the disease or by the evidence of the roentgen ray.

A point of special interest in the physical examination, which occurred frequently and which we have not seen mentioned, was the absence of bronchial vocal fremitus or bronchial breath sounds during a careful examination covering several minutes, and then the abrupt appearance of such signs even in marked degree, perhaps during a few breaths only, followed again by their disappearance. With experience we found that we could sometimes provoke such abrupt changes, by one maneuver or another, such as turning the patient from side to side or placing him upright or by a deep breath or a cough. In doubtful cases we never omitted the trial of these maneuvers and were frequently rewarded for the effort.

Percussion dulness, as a localizing sign, was of very slight value, seldom if ever being a guide in early diagnosis and being notably unreliable as a guide to the extent of lung involvement in the advanced stages, as tested by necropsy findings. While the same was true more or less for all signs, as tested at necropsy, this held true for percussion evidence in a special degree. The reason for this was made plain at necropsy by the striking degree of acute compensatory emphysema of the lungs, both in the involved and uninvolved portions. Instead of transmitting a dull note, a consolidation often actually misled by yielding hyperresonance on percussion.

Palpation seldom offered any evidence of particular value, especially when it was most needed for early diagnosis.

In looking for evidence of pneumonia in its early stages, it was useless to examine the apexes of the lungs or the front of the chest. The early localization was never found in those portions, but almost without exception near the roots of the lungs along the inner margin of the back and extending therefrom in other directions, especially downward into the bases. Much time in examination is saved by a knowledge of this fact. Early roentgen-ray examination of patients confirmed fully this almost unbroken rule.

As to the side of the chest most often involved in the early process, no striking difference was observed either by general or by roentgen-ray examination though possibly the right side preponderated slightly.

The roentgen ray was used for aid or confirmation in 566 cases, always in doubtful cases. The evidence that it afforded proved reliable in the main, and its assistance was of the greatest value. Exceptionally, it failed to accord with definite physical signs and showed a negative chest in a positive pneumonia. The reverse was more often true, the roentgen ray showing a consolidation in the absence of physical signs.

Among the 1,526 cases of pneumonia there developed, up to Jan. 1, 1919, only twenty-seven instances of empyema, making an empyema incidence of 1.76 per cent., calculated for pneumonia. Eight of the twenty-seven patients died, six in the active period of pneumonia, two at a later period. Recently we have seen empyema develop six months after influenza pneumonia, the necropsy showing unilateral fibrosis and contraction of the lung, purulent bronchitis and small multiple abscesses.

During the winter months following the epidemic we observed in patients admitted to hospital few late complications and sequelae that could be attributed to preceding influenza and pneumonia. This observation was rather surprising, and contrary to expectation. In a few instances we have seen chronic bronchitis with cough and râles persist for fully six months after pneumonia, without much impairment of general health. Such signs naturally suggest a suspicion of tuberculosis, but this was apparently excluded.

The first fifty fatal cases were subjected to necropsy without selection and thereafter only occasional cases were brought to necropsy for special reasons. The findings were the same as reported from other camps, in general extensive, often confluent, bronchopneumonia with marked compensatory acute emphysema.

The bacteriologic and pathologic studies of the disease disclosed no facts of peculiar importance and determined nothing as to the real cause of the disease.

SUMMARY

1. The epidemic of influenza at Camp Upton in its clinical aspect and severity was the counterpart of the disease as reported from the other great camps in the northeastern section of the United States.

2. Secondary bronchopneumonia was the one predominant complication. Bronchopneumonia with its complications, chiefly empyema, was the sole cause of death. Empyema was encountered in only 1.76 per cent. of pneumonia cases.

3. The statistical tables and graphic charts are arranged to show, by reading the tables crosswise and the charts up and down, the ultimate outcome (complications and deaths) that resulted from the original daily admissions of influenza, calculated up to Jan. 1, 1919, irrespective of the date on which the complications or deaths happened to fall. This arrangement portrays the relative severity of the disease at all stages of its progress.

4. Chart 2, based on Table 2, shows the curves of pneumonia incidence rate compared with pneumonia mortality rate, expressed in percentage, resulting from admissions of primary influenza week by week through the epidemic. This chart brings out visually the interesting and unexplained fact that the pneumonia incidence rate increased while the pneumonia mortality rate decreased progressively and strikingly from the start throughout the course of the epidemic. This fact, if confirmed in other military camps, tends to invalidate claims of special therapeutic efficacy based on results obtained after the early part of the epidemic, during a period of natural decline of mortality.

5. The use of digitalis in large doses at the beginning of pneumonia, employed as routine practice, resulted in no observed harmful effects in any case, and proved of distinct benefit. The pulse remained slow and regular, even in fatal cases, to the end.

6. The early diagnosis of the type of bronchopneumonia secondary to influenza seldom rested on clear physical signs in the chest. The physical signs were evasive and slight and needed to be carefully sought for and combined with the other clinical data or the roentgen-ray findings in determining an early diagnosis. The criteria for diagnosis are described in some detail.

7. Toward the end of the epidemic of influenza there was added a new affection, occurring in epidemic form, that symptomically closely resembled influenza, needed careful differentiation, and led to much confusion and error in diagnosis—a peculiar form of infectious tonsillitis, characterized particularly by swelling of the tonsils and a membranous deposit on them. This affection has been the chief cause of admission to hospital from late November to the present time (April 1, 1919). A similar affection prevails widely in other places and is masquerading in vital statistics under the guise of influenza.

HYPOPHYSIAL DYSTROPHY IN HYDROCEPHALUS

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Besides primary disturbances of the hypophysis itself, such as tumor, hypoplasia, etc., there are a number of intracranial conditions, either in the vicinity of the gland or more remote, that, directly or indirectly, may lead to interference with its function, resulting in the development of pituitary adiposity. Not only neighboring new growths, but also severe hydrocephalus with dilatation of the third ventricle, of whatever origin, may exert deleterious pressure on or obstruct the hypophysis and thus interfere with its normal function.

Harvey Cushing[1] remarks that secondary changes probably occur in the pituitary body in every case of increased intracranial tension, often with gross deformity and resultant functional disturbances which frequently elicit recognizable clinical manifestations. The scanty literature on the relation of hydrocephalus to the pituitary gland has been reviewed by the above named writer and in THE JOURNAL by Pollok.[2]

As an instance of conspicuous manifestations of hypophysial dystrophy in connection with a hydrops ventriculorum, the following case of a patient admitted to the Cook County Hospital, Oct. 15, 1918, may be reported:

REPORT OF CASE

History.—The girl, F. M., aged 8 years, 10 months, had always been a strong, bright child and had had a somewhat large head. When 16 months old, she is said to have weighed 36 pounds. After December, 1917, the girl often came home from school with wet clothes, being unable to hold the urine long. She drank much water and had to urinate frequently. She had, during the winter of 1917-1918, daily attacks of supra-orbital headache, sometimes accompanied by vomiting, with occasional dizziness. Her appetite grew ravenous, especially for bread. Polydipsia and polyuria lasted up to the time of admission to the hospital.

In February, 1918, her body weight, which was then 72 pounds, began rapidly to increase, and she became obese. At first irritable and "nervous," she soon became apathetic and sleepy, quite in contrast with her previous alertness, and she ceased making progress in the school. She tired very easily, and had difficulty in keeping her balance; walking became difficult, and she finally had always to be led by her mother. After the end of February, she was unable to attend school. The upper extremities became weak, trembling, awkward and ataxic. During that year she grew rapidly—"one could see her grow;" there also occurred a marked aggravation of preexisting genua valga and a striking enlargement of the head, so that it became difficult to purchase a hat large enough for her.

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[1] Cushing, Harvey: The Pituitary Body and Its Disorders, 1911.

[2] Pollok, L. J.: Hypopituitarism in Chronic Hydrocephalus, J. A. M. A. 64:395 (Jan. 30) 1915.

Physical Examination.—Physical examination revealed a well developed, obese girl (Fig. 1), weighing 95 pounds, body *length 135 cm.*, distance of lower edge of symphysis *from* floor 66.5 *cm.* There was a *marked* development of adipose tissue, especially on the neck, in the region of the angulus mandibulae, of the pectoralis muscles, on the lower part of the large protruding abdomen, and on the mons veneris, which was separated from the abdomen by a deep furrow. There was also around the hips and on the upper part of the thighs an excessive amount of adipose tissue. The circumference of the chest in the nipple line was 74 cm., of the abdomen in the umbilical line 83 cm., and around the trochanters 82 cm.

The general integument and mucous membranes were of a healthy color; the skin was very soft, delicate, smooth and without perspiration. The body was covered with a very fine lanugo, that on the outer aspect of the forearm being more developed. The labia *majora* were much developed, large and covered with dense lanugo and a few darker, longer and thicker hairs. The hair of the scalp was abundant and long. The skull was large, its horizontal *circumference* being 59.5 cm.; the measure from the meatus auditorius of the one side to that of the other was 39 *cm.* The *skull in the* region of the anterior fontanel was thinned, distinctly yielding on pressure, and tender.

The face was very fat. The veins of the right upper *lid* and temple were bulging, those of the left *upper* lid less so. There was slight exophthalmos. The pupils were large, reacted at times sluggishly, at other times promptly. The eye fundus was *normal*. The hands were graceful, somewhat pudgy, very soft and smooth, the fingers being somewhat tapering. The *nails of* both thumbs had a normal lunula, *the index* fingers a hardly visible lunula, while the other fingers had no crescent at all. The hands and feet were cold. Genua valga and pedes valgi were present.

There was motor ataxia of the arms, which on some days was very pronounced, on other days demonstrable only with finer tests. The gross muscular power of the arms and legs was much reduced. There was no spasticity. The patient was able to sit freely without ataxia, but was unable to stand or walk without support, and swayed and fell if not held up. The general asthenia forced her to spend all her time in bed or on a chair. The patellar reflexes were increased, that on the right side being more pronounced. Babinski's reflex was positive. There was ankle clonus, especially on the right side. There was involuntary micturition. The Wassermann test was negative. The systolic blood pressure was 95, diastolic 65. The pulse was between 100 and 110. The intellectual faculties were much impaired, and the *school* learning was very deficient. On three *occasions*, 100, 150 and 210 gm. of glucose were given by *mouth* without causing glycosuria.

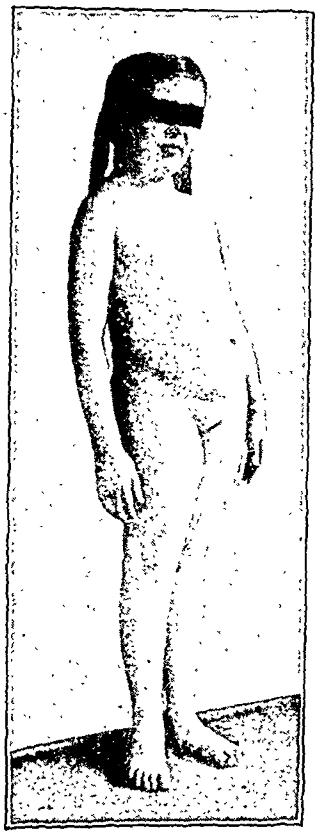

Fig. 1. — Hydrocephalus, accompanied by hypopituitarism.

The roentgenographic examination (Fig. 2) revealed a greatly enlarged, shallow sella turcica and reduced clinoid processes. The stereoplates of the entire skull showed a hydrocephalus with open coronal suture and marked digitations of the frontal bone.

The girl gained 3 pounds in the first two weeks of observation (98 pounds). The reflexes were changeable, the ankle clonus often being absent. Later incontinentia alvi supervened. By the end of November, bilateral *optic* neuritis was found, the vision of both eyes being 20/30. The hairs on the labia majora increased somewhat in size and number. The sensorium was free, the girl friendly and kind; however, she was quiet and often languid and drowsy. During the last three months of her life she had periods of marked apathy, even torpor, when suffering from measles, otitis media suppurativa acuta and bronchopneumonia, to which she succumbed, March 2, 1919. She grew 3 cm. in height after admission to the hospital and lost in body weight during the last few weeks.

Postmortem Findings.—From the pathologic report, for which I am indebted to Dr. F. H. Stangl, resident pathologist at Cook County Hospital, the following features may be mentioned here:

The calvarium measures 3 mm. in *thickness*; its sutures are only fibrous. The *brain* is large, owing to an increased amount of ventricular fluid. The convolutions are markedly flattened. The brain is 16.1 cm. wide, 20.3 cm. long and 10.1 cm. high, and, with its contained fluid, weighs 2,190 gm. The infundibulum is 12 mm. long and kinked on itself. The hypophysis is but slightly flattened and measures 7 mm. by 11 mm. by 16 *mm.* Serial coronal sections of the brain reveal greatly dilated ventricles with reduction in the brain substance surrounding them. The *right lateral* ventricle measures 4.5 cm. transversely *and* 6.5 *cm.* vertically, the left one 3.8 and 6.5, and the third ventricle 2.0 and 2.5 cm., respectively. There is a shifting of the parts of the brain, especially of the occipital half, with *resulting* malposition. The aquaeductus Sylvii is entirely closed by compression, and the right hemisphere *of the* cerebellum has undergone decrease *in size* from pressure.

The internal genitalia *reveal* no gross *changes*. The body of the uterus is 3 *cm.* long, 1.5 cm. wide at the fundus and 0.5 cm. thick. Sections of the hypophysis stained with *eosinhematoxylin* have been examined microscopically by Dr. G. B. Hassin with the following result: The three portions of the organ were distinctly shown; they are surrounded by a connective tissue membrane consisting of collagen fibers with well stained oblong nuclei. The anterior or glandular part exhibited *numerous* acini, some of which appeared more densely stained than others. The epithelial cells of the acini or alveoles showed a large, well developed granular cytoplasm, containing an eccentric nucleus Some *epithelial* cells were unusually large, exhibiting two or more nuclei. *In other acini* which were quite numerous the epithelial cells were very pale, homogeneous, irregular in shape, but with a distinct, well stained nucleus. Such cells often merged together forming a large colloidal mass containing several nuclei. The colloid often totally obliterated the acini, or filled up their *lumina*, sometimes appearing as very large diffuse masses or small globules freely scattered in the interalveolar spaces. The blood vessels were dilated and greatly congested; some were partially or totally filled with a colloid substance. There were to be seen foci of hemorrhages in the tissue of the capsule and between the latter and *the* glandular tissue. The *pars* anterior of the hypophysis was in the center of the section—isthmus-like—*continuous* with the posterior portion, which appeared reticular, *the stroma in the* area of junction showing much wider meshes *than* in the rest of the posterior lobe. There were to be seen a few congested capillaries and still fewer colloidal bodies.

The lateral portions between the anterior and the posterior *lobes of the* hypophysis (of the pars intermedia) *were occupied* by strikingly large cuneiform clefts or rather cystic formations lined with epithelial cells and entirely filled with colloid. *The latter* contained cellular masses with distinct nuclei, *situated here* and *there*, but as a rule near the *margins of* the cystic clefts. These two colloidal formations can be seen with the naked eye, the larger one measuring 1.5 *mm. in width* and *3* mm. in length. The pathologic changes can thus be summed up as subcapsular hemorrhages, excessive hyperemia and *vascularization* of the anterior lobe, hyaline or colloidal thrombosis and excessive amounts of colloidal acini. The findings so far give no exact idea of the presence or absence of any pathologic process that caused the hydrocephalus. Further studies are being carried on, and a more complete report, especially of the histopathology of the brain is forthcoming, being in preparation by Dr. G. B. Hassin.

COMMENT

Certain features of the anamnesis of the case are suggestive and a part of the clinical syndrome is quite characteristic of hypophysial dystrophy. The manifestations of the latter, however, must be distinguished from those of internal hydrocephalus. The rapid development of adipositas nimia, with eunuchoid localizations, and the high tolerance for glucose, indicate constitutional, metabolic changes—such as are observed in functional deficiency of the posterior lobe of the hypophysis. The delicate skin, the lack of perspiration and the arterial hypotension likewise point to this organ. On the other hand, the abnormal increase of the size of the skull, with thinning of the region of the anterior fontanel, and the marked remissions and exacerbations of the nervous disturbances, leave no doubt about the existence of hydrocephalus internus. Its causal agency, however, cannot be ascertained clinically beyond dispute, the differential diagnosis considering an "idiopathic" hydrocephalus, or rather the exacerbation of a previous hydrops ventriculorum, and a possible distant obstructive tumor without focal manifestations.

The presence of the hydrocephalus gives satisfactory explanation of dystrophy, through the assumption of a pressure lesion of the hypophysial apparatus, and, with the absence of optic nerve disturbances, even as late as at the time of admission, militates against the assumption of a tumor of the hypophysis itself. The radiologic findings are in accord therewith, the shallow dishlike dilatation of the entrance of the sella turcica being merely a partial manifestation of the cranial changes that are due to the general increased intracranial tension.

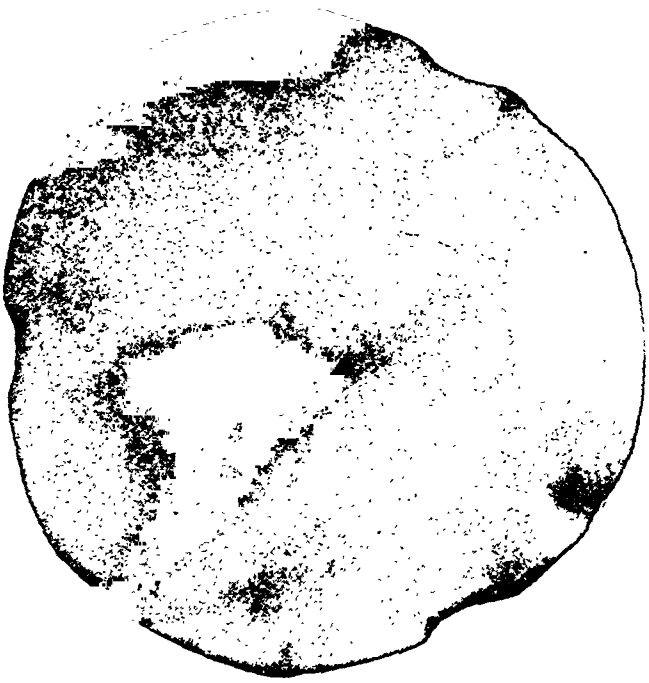

Fig. 2.—Roentgenogram of sella turcica and clinoid processes in a case of hypopituitarism.

Cushing at first explained the pituitary deficiency in hydrocephalus as due merely to the dilatation of the third ventricle, with consequent flattening of the gland. Since the demonstration of a possible discharge of the posterior lobe secretion into the cerebrospinal fluid, he sees in the stasis of the cerebrospinal fluid an equivalent in its effect to an experimental obstruction of the stalk, or to a compression by an immediately superimposed infundibular tumor. In connection with his ideas it is noteworthy that in our case a slight flattening of the gland and kinking of the infundibulum were found postmortem, according to the report given me.

Polyuria and polydipsia, which for a time were so marked in our case, have not infrequently been noted by other authors as a temporary symptom in hypophysial dystrophy, and in a few cases a serious diabetes insipidus was the predominant feature. It also has been encountered for a period as an after-effect of surgical operations in the hypophysial region, even of simple sellar decompression (Cushing). The occurrence of polyuria observed by Schaeffer[3] in bloodless, mechanical or chemical irritations of the hypophysis, and the well established diuretic effect of the extract of the nervous lobe, combine to indicate the cause of this clinical symptom to be an increased secretion resulting from irritative conditions, such as pressure, inflammation, etc.

Thus a state of initial stimulation of the posterior lobe in our case may be assumed preceding its inhibition or obstruction. The persistence of polydipsia, however, during the period of well developed adiposity, the latter indicative of hypofunction, cannot, of course, be attributed to a simultaneous hyperfunction; it must be explained on a different basis. We may consider it merely a habit formed during the illness. Several circumstances indicate this; the excessive drinking of water, for instance, had entirely lost its initial compelling character and its degree; it became easily controlled by persuasion, was subject to occasion and absent during the stay in the hospital.

On the other hand, marked polyuria has been observed also in tumors (gumma) in the vicinity of the hypophysis and in various affections of the brain stem (chiasma, subthalamic region, etc.); it likewise has been produced by irritation of certain parts in the medulla oblongata.

The polyphagia, repeatedly mentioned in the literature, has been attributed to posterior lobe insufficiency. If we interpret the rapid growth of the patient, the advanced development of the labia majora, and the growth of hair on the labia majora in the light of the present preponderant evidences of the function of the parts of the hypophysis, we may possibly have here an example of activation and hyperfunction of the anterior lobe, combined with posterior lobe insufficiency (dyspituitarism, Cushing). This unusual type differs thus from the common type (Froehlich's[4]) of hypophysial dystrophia adiposogenitalis, which is characterized by undergrowth and sexual hypoplasia due to simultaneous anterior lobe inhibition. Somewhat similar instances of dyspituitarism are those of Neurath[5] and Case 34 of Cushing.

The disturbance of micturition and defecation finds its ready explanation in the large hydrocephalic effusion, with pressure lesion of the corresponding cerebral districts. Bladder disturbances, which, according to Frankl-Hochwart and Froehlich,[6] are not infrequently observed in hypophysial dystrophy, have been explained mostly by compression of the pes pedunculi by a growing tumor of the pituitary body. However, both authors consider also the possibility of the reduced function of the posterior lobe and the lack of the pituitrinum infundibulare being a responsible factor.

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[3] Schaeffer, E. A.: Quoted from Falta.
[4] Froehlich: Wien. klin. Rundschau, No. 45, 1901.
[5] Neurath: Ueber Fettkinder, Wien. klin. Wchnschr., No. 2, 1911.
[6] Frankl-Hochwart and Froehlich: Arch. f. exper. Path. u. Pharmakol. 63: 347, 1910.

The presence of a marked degree of hydrocephalus in our case renders it futile to distinguish the psychic alterations of hypophysial origin from those due to the ventricular effusion.

The supervening optic neuritis would have made surgical interference urgent. Balkenstich operation after Anton and Bramann was contemplated as the simplest decompression operation for the hydrocephalus, with the possibility in view of thus relieving and reactivating the pituitary body. The intercurrent diseases, however, rendered it impossible.[7]

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THE SURGICAL TREATMENT OF RHINOPHIMA

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Rhinophima is the most advanced stage in the development of acne rosacea, characterized by marked hypertrophic changes in the cutaneous and subcutaneous tissues of the nose, producing a firm, reddish or purplish lobulated, and, in extreme cases, pendulous tumor masses. This condition is frequently so disfiguring and repulsive as to prevent the person afflicted with it from earning a livelihood or mingling in society, and it is in just such cases that surgery offers the only means of relief.

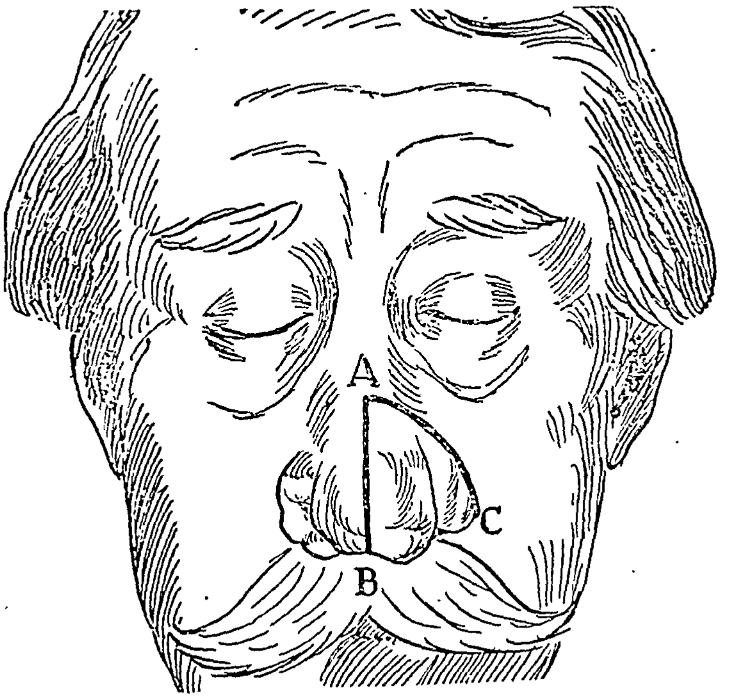

Fig. 1.—Incision made in removing the left half of the growth: *A B*, midline incision made down to the cartilage; *A C*, lateral incision encircling the growth.

The pathologic changes which lead up to this condition may well be divided into three stages. The first stage is marked by a simple venous engourgement. The second stage shows the veins and the capillaries permanently enlarged. In the third stage, there is an enormous hyperplasia of the connective tissue elements of the skin, and the sebaceous glands are so enlarged that the nose presents a honeycombed and unsightly appearance.

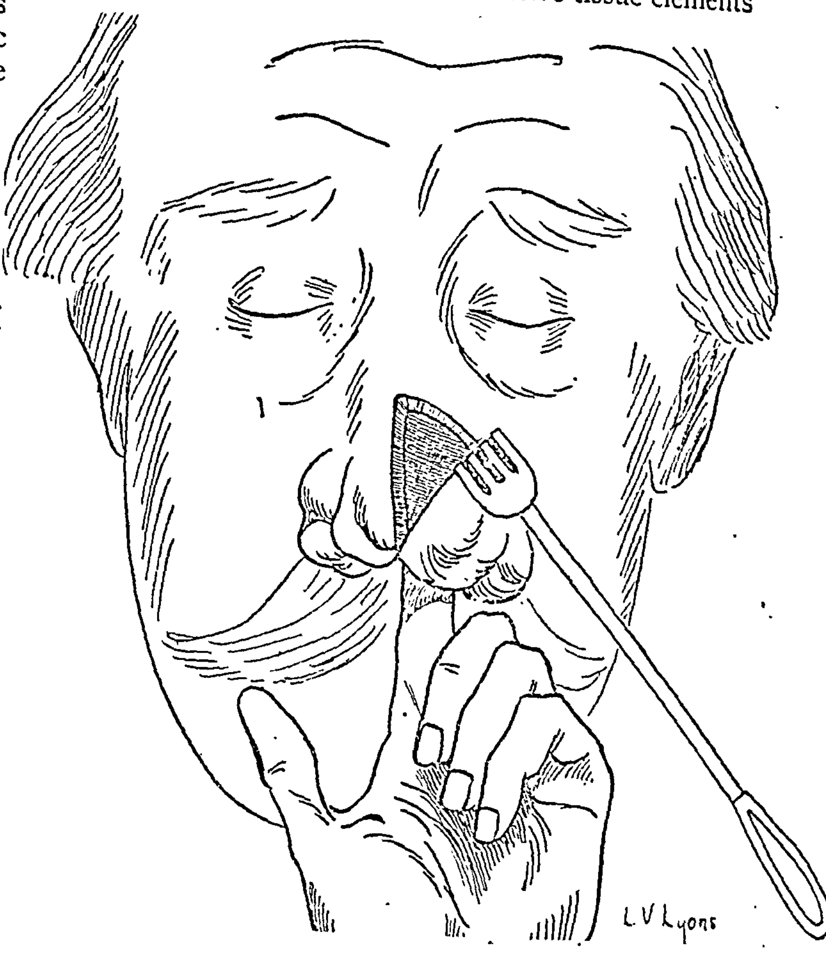

Fig. 2.—The procedure for removing the growth.

TREATMENT

It is at this stage that the electric needle, ointments and the roentgen ray are no longer of therapeutic value, but where surgery is the only cure. When the tumors are pedunculated, a condition which frequently occurs, their removal requires no special description. There is, however, a marked difference in the operative procedure involving extensive hypertrophy without pedunculation, as in the case of the patient on whom I operated, as shown in the accompanying photographs.

Instead of removing the tumor masses in one piece, in my recent cases, I excised first one half then the other half of the growth, making the operation much easier to perform.

OPERATIVE PROCEDURE

Under general anesthesia, an incision is made down to the cartilage in the median line of the nose, as shown in Figure 1, from *A* to *B*, and a second incision all around the growth from the midline outward from *A* to *C*. The forefinger of the left hand is now inserted into the left nostril, with the palmar surface forward, as a guide. The median edge of the tumor mass is grasped with mouse-tooth forceps (assistant to hold these), and all the diseased tissue, including the entire left lower half of the nose, with the whole thickness of the skin, is dissected off with a knife, the bony and cartilaginous framework of the nose being exposed. The hemorrhage is controlled by pressure with hot pads or forceps and ligations, if necessary. The foregoing steps are repeated on the right side. It is important to leave a little skin near the opening of the nares to avoid subsequent contracture with the resulting stricture.

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[7] In addition to the references already given, the following will be found of interest.
Falta, W.: The Ductless Glands (translation from the German).
Strauch, A.: Infantilism, Am. J. M. Sc., 148: 247, (Aug.) 1914.

The final step in the operation demands considerable care, as the skin graft should be applied in one large piece if possible, and the fairly thick graft which was used in my case has contributed very largely to the striking similarity in the appearance of the new covering of the nose to that of the face in general. Short nasal tubes are now inserted into the nostril, and the nose dressed by carefully covering the graft with several layers of silver foil. A gauze dressing is applied, which is held in place with adhesive plaster, and allowed to remain undisturbed for six days. As all my skin grafts were successful, no further aftertreatment was necessary. In cases of this sort, in which the condition so seriously affects the appearance of the patient and the results of the operation are usually both successful and gratifying, it seems surprising that an operation so simple, as here described, has not been resorted to more frequently.

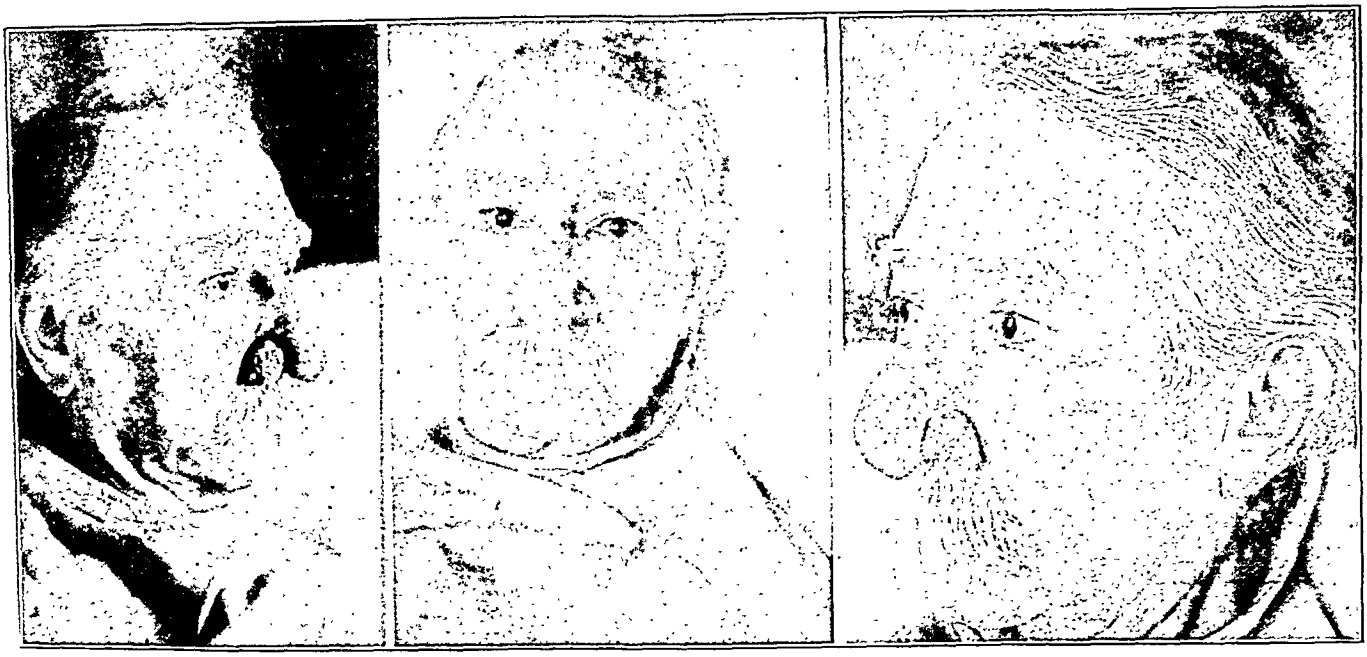

Fig. 3.—Appearance of patient before operation.

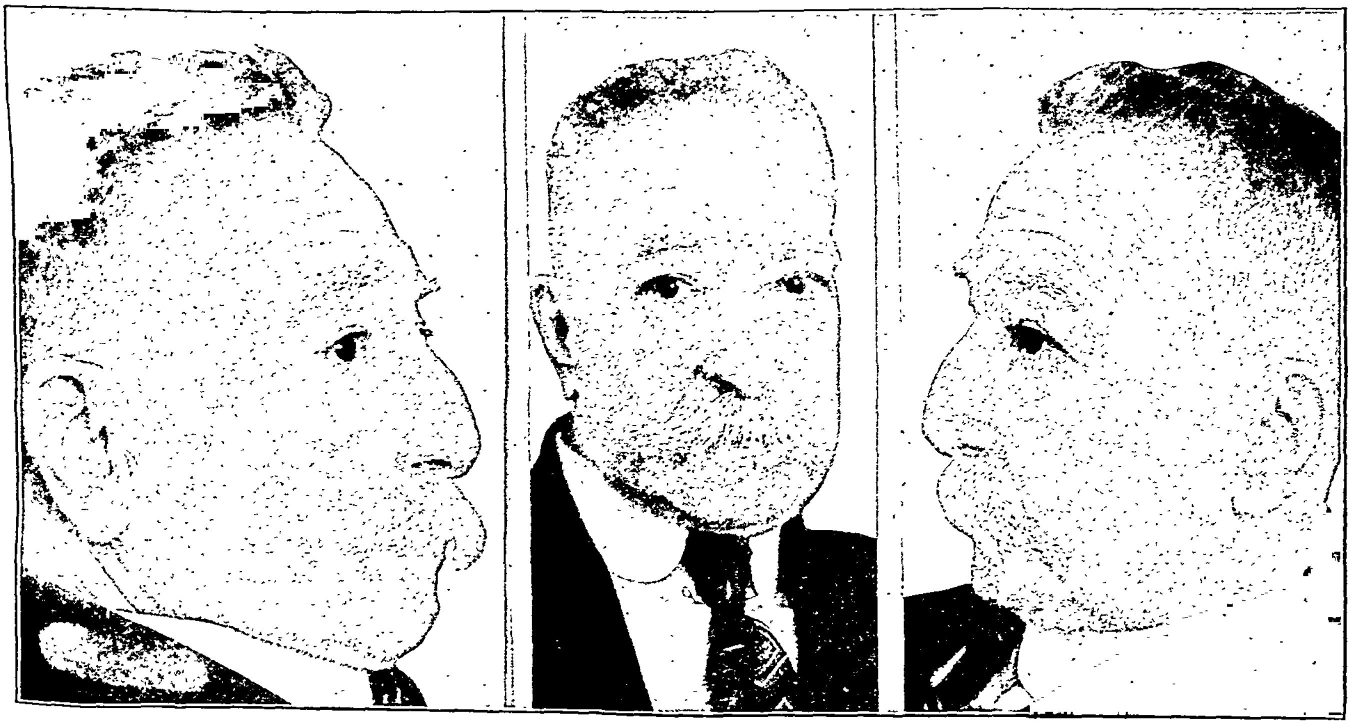

Fig. 4.—Appearance of patient after operation.

The Education of the Expert.—The interests of the public and of the nation will be served if all important problems, public as well as private, are in the hands of experts for solution. In administration, legislation, the public health service, agriculture, all branches of engineering, commerce and education, practical problems are continually arising and on the correct solution of these problems depends the welfare of many individuals and even of the nation itself.—Dr. P. G. Nutting, *Scientific Monthly*, November, 1918.

STERILITY OF CATGUT

T. BUTTERFIELD

AND

LEO F. ELY

Lieutenants, S. C., U. S. Army

The writers were assigned by the Surgeon-General to make bacteriologic examination of catgut manufactured for the Army during the period from Dec. 11, 1918, to May 3, 1919, and a special opportunity was, therefore, presented to make extensive study of the sterility of the commercial catgut as manufactured by the particular firms in Chicago that were concerned with the Army contracts. Approximately 15,000 tubes, selected at random, representing a total output of 5,000,000, were examined. The total number of contaminated tubes found was 1,518, or 11 per cent.

Through the courtesy of the manufacturer it was permitted to vary the sterilization process under official government supervision until a more dependable process was found whereby a sterile product would be furnished. This experimental process will be described later. The method followed in making the bacteriologic examinations is first described; the process of sterilization used by the manufacturer, the difficulties of this process, and the advantages suggested as a result of our experiments are discussed later.

METHOD OF THE AUTHORS

An inspector representing the United States Appraisers Stores collected 100 tubes of catgut from each autoclave, and these were equally divided between the two bacteriologists. In order to prevent any possible sources of extraneous contamination being carried into the culture tube from the outside of the tubes containing the catgut, the tubes from each sterilizer were placed in a beaker and given a thorough washing in petroleum ether to remove all oil from the outside. After this preliminary precautionary measure the tubes were allowed to stand in a 1:200 solution of mercuric chlorid over night. The actual work of transferring the catgut from the tubes to the culture broth was done under a small glass cage, placed in a small room. The room and cage were wiped down each morning with a 1:1,000 solution of mercuric chlorid.

The following morning the tubes were lifted with sterile forceps from the mercuric chlorid solution and dipped quickly into boiling water to wash off the adherent mercuric chlorid. The empty end of the tube was heated in a small flame and the end broken off with sterile forceps. The coil of catgut (average length 18 inches) was pulled with a small pair of sterile scissors part way out of the broken end of the tube and the coil was clipped in two, thus dividing the catgut into pieces about 2 inches long. The catgut was then taken up with the scissors and dropped into a sterile, cotton-stoppered Erlenmeyer flask containing about 120 c.c. of sterile water. The catgut was left for two hours in this wash water, which was shaken occasionally. Some batches were examined in duplicate, one batch being washed by this method, while a culture was made at once of the other without washing, in order to ascertain what effect, if any, the washing process had on the catgut.

After this temporary washing to remove the adherent oil, two or three lengths of catgut (about 7 inches) were placed with sterile forceps in each of the two tubes of broth. The broth tubes were incubated for seven days at 37 C., one aerobically and the other anaerobically. By this method, two tubes were made from each suture tested.

The anaerobic condition was obtained by autoclaving the broth tubes just before inoculating and by covering the broth immediately after inoculation with sterile liquid petrolatum. Cultures of *B. tetani* from two reliable sources grew favorably under these conditions. For controls on technic pieces of ordinary coarse twine were sterilized in water and carried each day through the same processes as the specimen of catgut. The control tubes were found sterile in all tests. Further controlling tests were made by exposing tubes of broth placed in different parts of the room while the work was in progress to determine the possibility of air contamination in the working space. In one instance, one of these exposed tubes was found to be contaminated and on microscopic examination it was revealed to be a staphylococcus, an organism which was rarely found to be the one responsible for contaminated catgut. The fact that many sterile tubes of catgut, a considerable number of which had been washed in water, were found sterile, simultaneously served as a control on the wash water and broth.

PREPARATION OF MEDIUM

The medium used for these determinations was nutrient broth prepared according to the standard methods of the American Public Health Association with 0.2 per cent. of glucose added, final reaction 0.4 to 0.8 + to phenolphthalein. The broth was tubed in about 15 c.c. amounts to each tube, and then sterilized at 15 pounds pressure for 20 minutes. The glucose was added to render the medium more favorable for certain anaerobic forms.

The tubes were examined at the end of the second or third day and again at the end of the seventh day. The majority of contaminations showed up at the first reading. The physical appearance of the broth in the tubes was considered as sufficient evidence of infection. Gram stains, however, were frequently made from tubes that indicated contamination in order to determine the morphology of the infecting organism.

The catgut submitted for this examination was first prepared and completely dehydrated according to the particular process of the manufacturer. It was then immersed in the tubing fluid in the tubes—in these cases a high boiling oil—and then the tube was sealed. When sterilization by heat is employed it is necessary that all traces of moisture shall be removed or the catgut will become unserviceable when it is heated. On the other hand, the temperature to which the catgut is raised must not be carried too high or the tensile strength will be injured as a result of carbonization. Under these conditions autoclaving of dry catgut in sealed tubes is practically nothing more than sterilization by dry heat. The tendency has been, therefore, to maintain the tensile strength rather than to apply sufficient heat to kill the most resistant organisms. The experiments on the sterilization process proved conclusively that in some cases the large number of contaminations found could be attributed to inefficient sterilization.

As far as the writers know, no work has been done to determine the resistance of bacterial life to heat, when the forms of such life are completely dry, under oil, and protected from the effects of live steam.

DETERMINATION OF CRITICAL PRESSURE

A number of sterilizers were run under varying pressures to determine the critical pressure above which one could be assured of a sterile product and below which a sterile product would always be uncertain. Steam pressures varying from 22 pounds up to 32 pounds for three hours were used. It was found that with a suture which received the preliminary treatment such as those tested had received the critical pressure was between 27 and 28 pounds for three hours. Sterilizers run below 27 pounds or for a period less than three hours or by intermittent methods frequently showed contaminated catgut, and the lower the pressure the larger was the number of contaminated tubes. Twenty-five autoclaves, completely filled with tubes, were run at from 28 to 30 pounds pressure for three hours and on examination none of these tubes showed contamination. The catgut sterilized at this temperature proved to be of a satisfactory tensile strength.

EFFECT OF PRELIMINARY WASHING

During the course of the work the question was raised as to whether the preliminary washing of the catgut in the sterile water was an advantage or a disadvantage to the test. It was quite evident that when the results with the washed and unwashed catgut were compared there might be a possibility that some of the contamination had been washed from the surface of the catgut by this washing process, thereby securing a more sterile product than the actual conditions warranted. The reason for washing the gut in the beginning was that the different persons consulted all agreed that any oil which might adhere to the gut in transfer would be detrimental to any possible bacterial growth that might occur. To decide this question the samples from fifty sterilizers were run in duplicate washings, in half of which the washing process as described was used and in half the samples were planted at once without preliminary washing. The results showed about 30 per cent. more contaminated tubes from the tubes put on without washing. This result can be due to one of two causes. The washing may have reduced the amount of surface contamination on the catgut, or what appears to be more clearly the cause, the amount of catgut planted influenced the result; i. e., when the catgut was washed only two or three pieces (about 7 inches) were put in each tube; while, on the other hand, when it was put on without washing the entire coil (about 18 inches) of gut was placed in the culture tube.

A short study was made to determine whether the contamination, which was being found, was in the immersion oil or in or on the catgut itself. The oil from a series of tubes was poured off, a culture was made and the catgut was planted at the same time in correspondingly numbered tubes. The percentage of contaminations from the catgut cultures was greater than from the oil alone and in no case was evidence of contamination from the oil obtained when the corresponding catgut tube did not show similar growth.

A complete record was kept showing the size of each piece of catgut tested and the preliminary treatment that it had received. These records showed that when a sterilizer containing various sizes of catgut comes through without proper sterilization, the larger sizes of catgut will show a correspondingly increased percentage of contaminated tubes. In the same way, when chromicized and nonchromicized tubes of the same size are sterilized defectively in the same autoclave the chromicized tubes will show a larger percentage of growths. It is possible that chromicizing, like heating, renders the bacterial spores more resistant to subsequent sterilization.

CONCLUSIONS

In general it can be said:

1. When oil is used as an immersion fluid for the catgut, washing before planting should not be carried out if a fair check is desired on the sterility of the catgut. The suture should be taken from the tube for bacteriologic examination according to the methods commonly practiced among physicians when they have occasion to use catgut.
2. Chromicized catgut is slightly more resistant to sterilization by heat than the plain catgut.
3. The infection that is found is either within or on the catgut itself and is not present in the immersion oil alone.
4. From 28 to 30 pounds pressure of live steam for three hours is absolutely necessary to sterilize catgut such as that which was submitted to us.
5. Since any contamination may be pathogenic or otherwise, it seems imperative to the writers that some system of federal control should be devised similar to that for biologic products so that all firms manufacturing catgut could be required to adhere to the same standards of sterility.

Clinical Notes, Suggestions, and New Instruments

THE USE OF IODIDS IN PYELOGRAPHY

D. F. Cameron, M.D., Minneapolis

In two articles[1] appearing in The Journal of the American Medical Association about a year ago, solutions of sodium and potassium iodids were suggested as suitable opaque mediums for pyelography. In these articles, 25 per cent. aqueous solutions of these salts were recommended as best suited for pyelography. It was further stated that the sodium and potassium salts had been used interchangeably, but that the sodium salt was preferable.

A recent release from military service has enabled the author to investigate further the use of these solutions. A more complete report of this investigation will appear later, but it seems well to report now certain modifications of the conclusions reached previously.

First, it is desired to emphasize, more strongly than before, that the sodium salt is to be preferred. Second, a 17.5 per cent. solution of sodium iodid has been found to be sufficiently opaque for pyelography, and nothing is gained by using a stronger solution as was previously recommended. (Twenty gm. of sodium iodid dissolved in a sufficient amount of distilled water to make 100 c.c. makes a four-thirds molar solution, which is also approximately a 17.5 per cent. solution by weight.)

During the last two months, at the University Hospital, Minneapolis, the author has personally used, as a routine for pyelograms, solutions of sodium iodid in concentrations not exceeding 17.5 per cent. The thirteen pyelograms made have been very satisfactory. The procedure has been attended with very little discomfort to the patients and with no serious reactions whatever.

University Hospital.

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[1] Cameron, D. F.: Aqueous Solutions of Potassium and Sodium Iodids as Opaque Mediums in Roentgenography, J. A. M. A. **70**: 754 (March 16) 1918. Cameron, D. F., and Grandy, C. C.: Sodium and Potassium Iodids in Roentgenography, J. A. M. A. **70**: 1516 (May 25) 1918.

PROCEEDINGS OF THE ATLANTIC CITY SESSION

MINUTES OF THE SEVENTIETH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, JUNE 9-13, 1919

HOUSE OF DELEGATES

First Meeting—Monday Morning, June 9

The House of Delegates met in the Library of the Hotel Traymore, Atlantic City, N. J., and was called to order at 10 a. m. by the Speaker, Dr. Hubert Work, Pueblo, Colo.

Preliminary Report of the Committee on Credentials

The Chairman of the Committee on Credentials made a preliminary report for this committee, stating that the committee desired at this time to report progress, and that more than a quorum of delegates had qualified.

As there was no objection, the report was accepted.

Next in order was the roll call by the Secretary.

The Secretary stated that the registration of the delegates in attendance recorded the presence of more than a quorum.

A quorum being present, the Speaker announced that the House was constituted and ready for the transaction of business.

The next order of business was the presentation, correction, and adoption of the minutes of the Sixty-Ninth Annual Session.

The Secretary stated that the minutes had been printed and circulated among the members of the House of Delegates, with the request for criticisms or corrections, but none had been received.

It was moved that the reading of the minutes of the Sixty-Ninth Annual Session be dispensed with and approved as printed.

Seconded and carried.

Addresses of Executive Officers

Drs. Hubert Work, Speaker; Arthur Dean Bevan, President, and Alexander Lambert, President-Elect, addressed the house. See addendum, page 1764.

Reports of Officers

Report of the Secretary

The Secretary presented the following report, which was referred to the Reference Committee on Reports of Officers:

To the Members of the House of Delegates of the American Medical Association:

For the year 1918-19 I submit the following report:

MEMBERSHIP

The membership of the various constituent state associations which is the membership of this Association, according to records in the Secretary's office, May 1, 1919, was 82,288, as shown on the accompanying table.

FELLOWSHIP*

The Fellowship of the American Medical Association on May 1, 1918, was 44,715. During the year 753 Fellows have died, 2,193 have resigned, 310 have been dropped as not eligible, 257 have been dropped for nonpayment of dues, and 28 have been removed from the rolls on account of being reported "not found," making a total of 3,541 names to be deducted from the Fellowship roll. There have been added 4,238 names to the Fellowship roll of which 2,305 were transferred from the subscription list. The Fellowship of this Association on May 1, 1919, was 45,412, a net increase for the year of 697.

This gain in the number of Fellows, as in previous years, is due largely to circularizing subscribers to THE JOURNAL who were eligible, urging them to become Fellows.

INTERIM APPOINTMENTS

During the year, Dr. Ludvig Hektoen, Chicago, tendered his resignation as a member of the Council on Health and Public Instruction, and the President appointed Dr. Victor C. Vaughan, Ann Arbor, Mich., to serve on this Council until this annual session.

Dr. H. Gideon Wells, Chicago, tendered his resignation from the Council on Medical Education, and the President appointed John B. Dodson, Chicago, to fill the vacancy until this annual session. Dr. H. D. Arnold, Boston, also resigned from the Council on Medical Education, and the President appointed Dr. Isadore Dyer, New Orleans, to fill this vacancy until this annual session.

THE AMERICAN MEDICAL ASSOCIATION AND THE RECONSTRUCTION PERIOD

At its annual sessions during the progress of the war, reports have been submitted to the House of Delegates regarding the Association's cooperation with the Federal Government in matters involving the services of physicians. These reports show that the Association endeavored to assist the Government in every way in which this could be done by a civilian organization. A review of these war activities would reveal few, if any, instances where the Association could have done more or acted differently than it did. However, in mobilizing an armed force under the conditions which existed, there were many occasions for criticism certain of which may appear to be warranted from the view point of the individual. The House of Delegates should know that letters from physicians have been received at the Association Headquarters in which the writer complained of the conditions of service in which he found himself, or criticised the Association's war policy. For example, physicians who were called to active military service and held in training camps complained because they were not assigned to posts in connection with the armed forces. Since the cessation of hostilities, letters have been received from physicians who have not been sent overseas, urging that the group to which they belong should be the first to be demobilized. On the other hand, physicians on overseas duty argued that because they have been kept away from home for a considerable period of time, they should be given the preference by being returned promptly to civil practice. Manifestly these matters are not within the province of this Association. Since the Armistice, a considerable number of physicians have been released from military service, and presumably the demobilization may be expected to proceed more rapidly as the overseas forces under arms are returned and discharged, but a sufficient personnel of the Medical Corps must be retained in service until the army has been reduced to a peace status.

Reports regarding the return of physicians to civil practice received from the different state associations are gratifying; it is almost the universal comment that these physicians are finding a hearty reception in the localities where they formerly practiced. When these physicians locate in new communities, they are in practically all instances welcomed by the medical profession of the locality. The state associations and the county societies undoubtedly will find a field for effective service in assisting these returning physicians to reestablish themselves in civilian practice. Moreover through our organization the courtesies which have always been shown by one physician to another may overcome the unavoidable irritations which arise between physicians who have served in the Army, the Navy and the Public Health Service and those who have remained at home.

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* These figures do not include those who are now Fellows by virtue of their being commissioned and on active duty as Medical Reserve Corps Officers but who previously have not been Fellows.

It cannot be expected that an exact prewar status ever will be restored. The task which confronts the American Medical Association, with its constituent state associations and component county societies, is to assist in bringing about a better state of affairs in the medical profession.

SECTS IN MEDICINE

The Principles of Ethics of the American Medical Association declare that "A physician should not base his practice on an exclusive dogma or sectarian system, for sects are implacable despots; to accept their thralldom is to take away all liberty from one's actions and thought." In a word, for years the American Medical Association has welcomed to its membership those who are primarily physicians. The several military services have commissioned physicians without regard to the fact that a considerable number of them have graduated from so-called sectarian schools. These qualified as physicians. All commissioned medical officers served under similar conditions and used in their professional work the same standard equipment. Sectarianism found no place in the medical military service. War experience has confirmed the position which the American Medical Association has maintained for so long a time and the Association may have a proper pride in emphasizing that it is a non-sectarian, all-inclusive organization of physicians.

ORGANIZATION OF CONSTITUENT ASSOCIATIONS

Constituent Association of	No. Counties in State	No. Component Societies in State Assn.	Number Counties in State Not Organized		No. Physicians in State (6th Ed. Directory)	Number Members of State Association		No. A. M. A. Fellows in State	No. Subscribers to Journal in State*
			1918	1919		1918	1919		
Alabama	67	67	0	0	2,530	1,752	1,751	387	296
Arizona	14	11	3	3	333	182	188	152	98
Arkansas	75	63	13	12	2,587	1,045	1,001	378	257
California	59	42	19	17	5,929	2,862	3,273	1,903	1,319
Colorado	63	29	32	34	1,713	874	881	525	321
Connecticut	8	8	0	0	1,701	1,067	1,018	640	338
Delaware	3	3	0	0	264	103	103	58	44
Dist. Columbia	....	....	0	...	1,237	559	573	372	245
Florida	54	32	22	22	1,296	562	566	202	196
Georgia	152	89	58	63	3,436	1,415	1,426	531	442
Idaho	41	25	16	16	449	132	123	94	130
Illinois	102	101	1	1	10,909	6,330	6,894	4,419	2,212
Indiana	92	91	2	1	4,765	2,055	2,093	1,285	429
Iowa	99	99	3	0	4,604	2.333	2,259	1,285	606
Kansas	105	63	33	42	2,683	1,633	1,637	816	362
Kentucky	120	117	7	3	3,503	2,146	2,130	685	344
Louisiana	64	40	23	24	2,023	899	1,029	372	339
Maine	16	15	1	1	1,179	744	720	292	135
Maryland[1]	23	21	2	2	2,268	1,012	1,047	694	420
Massachusetts[2]	14	14	0	0	5,870	3,681	3,709	2,088	1,009
Michigan	83	81	1	2	4,598	2,738	2,978	1,632	631
Minnesota	86	83	3	3	2,548	1,688	2,037	1,111	461
Mississippi	81	78	3	3	1,975	400	361	228	214
Missouri[1]	114	103	11	14	6,063	3,216	3,345	1,405	785
Montana	44	17	27	27	661	225	375	184	135
Nebraska	93	64	26	29	2,237	1,146	882	603	377
Nevada	16	3	12	13	152	89	79	43	32
New Hampshire	10	10	0	0	657	521	528	253	84
New Jersey	21	21	0	0	3,046	1,793	1,814	1,036	536
New Mexico	28	12	17	16	456	147	207	115	81
New York	62	61	1	1	15,877	8,470	8,540	5,090	2,702
North Carolina	100	86	15	14	2,237	1,277	1,231	412	308
North Dakota	53	51	2	2	604	190	429	260	118
Ohio	88	87	1	1	7,802	4,353	3,832	2,309	1,046
Oklahoma	77	65	9	12	2,672	1,466	1,583	584	269
Oregon	36	33	3	3	1,128	709	712	250	252
Pennsylvania[3]	67	63	4	4	11,539	6,928	6,626	3,794	1,615
Rhode Island[2]	5	5	0	0	759	427	409	290	119
South Carolina	45	41	4	4	1,237	705	719	291	235
South Dakota	68	10	7	8	646	373	368	221	146
Tennessee	96	67	29	29	3,481	1,686	1,599	561	382
Texas	250	179	71	71	6,236	3,508	3,059	1,334	592
Utah	29	4	24	25	477	267	229	164	116
Vermont	14	12	0	2	639	414	423	153	82
Virginia[4]	100	59	34	41	2,509	1,767	1,773	602	448
Washington	39	19	19	20	1,673	965	1,100	539	336
West Virginia	55	43	12	12	1,759	930	1,081	455	252
Wisconsin	71	71	0	0	2,783	3,001	3,041	1,084	489
Wyoming	22	5	17	17	254	82	93	71	75
Misc., (foreign)	....	....	...	...	......	.....	.....	631	2,003
Govt. subsc. for Army, Navy & U. S. P. H. S.	....	....	...	...	......	.....	.....	20	1,394
Alaska	....	....	...	...	......	.....	.....	3	18
Canal Zone	....	....	...	...	......	97	109	24	18
Hawaii	5	....	...	...	......	79	72	44	29
Porto Rico	7	....	...	...	......	113	93	39	30
Philippine Isl.	....	....	...	...	......	92	110	30	77
Totals	3,036	2,363	587	614	145,384	81,248	82,228	43,043	26,029
Commissioned Officers[5] and Honorary Fellows								2,369	
								45,412	

* Not including Fellows of American Medical Association.

Note.—The number of members of the different associations stated in this table is in accord with the membership of the several associations as they were reported to the Secretary on May 1, 1919.

The lack of an effective uniform system for reporting the membership of the state associations accounts for whatever discrepancies this table shows and detracts from the value of the statement.

Component societies are those societies which compose the state association. A component society may include one county or more.

[1] The state of Maryland has 23 counties and the city of Baltimore; Missouri has 114 counties and the city of St. Louis.

[2] These state associations are divided into district societies, and these are listed in the table as component societies. Some of these districts are smaller and some larger than the county, the county lines being ignored.

[3] Provision is made for the physicians in each of these counties to join the component society in an adjoining county.

[4] Virginia has recently adopted the plan of organization and is now establishing component county medical societies.

[5] This figure includes the Medical Corps of the Army, the Navy and the Public Health Service.

ELECTION OF HONORARY FELLOWS

The By-laws, Section 5, Chapter IV, reads: "Not more than three honorary Fellows shall be elected in any one year." Under ordinary conditions, this is a wise provision. However, this Victory Meeting is an occasion when the House should be in position to elect more than three Honorary Fellows. To present this matter in a practical form for the consideration of the House, it is proposed that the By-law quoted be amended so as to read:

> Not more than three Honorary Fellows shall be elected at any annual session; *provided, however, that on recommendation of the Council on Scientific Assembly, and by unanimous vote the House may elect more than three Honorary Fellows.*

FELLOWSHIP DESIGNATION

It has been suggested that Fellows of the Scientific Assembly of the Association be permitted to use an authorized designation after their names in signing scientific papers or under other conditions where it is desirable to indicate their Fellowship. The following designations have been proposed: F. S. A.—Fellow Scientific Assembly; F. A. M. A.—Fellow American Medical Association; F. S. A. A. M. A.—Fellow Scientific Assembly of the American Medical Association. It would seem advisable that the symbol, if one is adopted, shall recognize that Fellowship is a relationship to the Scientific Assembly—the scientific convention held in connection with the annual session of the Association.

Other matters in which the office of the Secretary of the Association has been concerned are reported to the House of Delegates from other sources.

Respectfully submitted,
ALEXANDER R. CRAIG,
Secretary.

Report of the Board of Trustees

Dr. Thomas McDavitt, Chairman, presented the following report, which was referred to the Reference Committee on Reports of Officers.

To the Members of the House of Delegates of the American Medical Association:

Two years ago the Board of Trustees presented to you a rather pessimistic outlook as regards THE JOURNAL. It was predicted that physicians entering the Government service would not keep up their subscriptions, and that quite a falling off in the subscription list might be expected. These predictions were not verified, as will be seen by the tables giving the circulation, published in the addenda to this report. It is true that a large number of physicians discontinued their subscriptions to THE JOURNAL on entering the service, but later, when they were able to give a definite address, many ordered their copies to be forwarded. Special efforts were made to accommodate medical officers not only by changing addresses as needed, but in every other way possible. THE JOURNAL records show that the actual number of changes of address for men in the Army during the year was 22,286.

The increase in subscriptions for the year 1918 was small —229 all told—but under the circumstances, this must be regarded as satisfactory. Although this report covers the

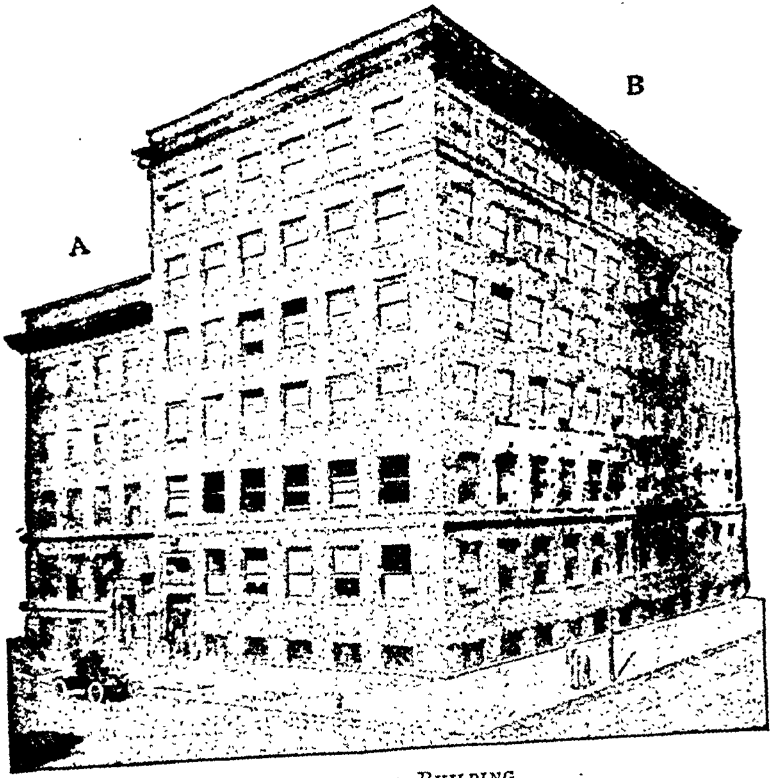
Disposition of Lawsuits

Last year the Board presented a statement regarding the disposition of five lawsuits during the year 1917, each claiming damage to the amount of $100,000, and in addition the Lydston suit attacking the constitutional rights of the Association to meet and transact business outside the State of Illinois. During 1918 three more suits have been disposed of:

> The Jenner Medical College vs. the Association and the Council on Medical Education, for half a million dollars. Many alleged grounds of libel were set forth. This case, which has been pending for six years, was dismissed on March 6.
>
> Two cases of E. Wells Kellogg and Edward Patrick Cooke, each for $100,000, for libel, based on an article published in The Journal exposing the Friedmann consumption cure, with which their names were connected. Both were dismissed in April.

Buildings

The Association's increased activities are beginning to crowd the headquarters, especially in the printing department. The Board has under consideration the proposition of tearing down the old building and extending the main building to take in this space. If this were done we would have a steel and concrete structure, 100 by 120 feet, six stories and basement. The building now occupied by the Association is constructed to carry two, or even four, more stories; but it probably is not expedient to make more than a six-story building at the present time.



Association Building

The proposition under consideration is to tear down the small building on the left and replace it with a steel and concrete building corresponding to, and thus completing, the main structure. The smaller building is what is called mill construction and is not fireproof.

As will be noticed in the Auditor's Report, the real estate of the Association is listed as worth $231,463.59. It consists of three lots, each 40 by 100, located at Grand Avenue and North Dearborn Street. Two of these — the corner and the one next to it — were purchased in 1902 for $42,646.90; the third, in May, 1903, for $14,950.15. Thus the lots cost $57,596. The first building was completed in November, 1902, at a cost of $41,322.90. An additional story was added in 1905, and the building extended back 50 feet to take in the new lot, at a cost of $23,622.47. Thus the old building (A) cost $64,945.37. Each year a depreciation is allowed on this building, and it is now carried on our books at $14,379.93. Building B was erected in 1911 at a cost of $202,189.95. The annual depreciation has brought this down on our books to $159,479.66. Thus, while the real estate—land and buildings—actually cost $324,731.37, they are in the Auditor's Report at only $231,463.59.

War Service

As the War Committee is making a report, it is unnecessary for us to go into details. Suffice to say that the expense connected with the War Committee, the Selective Service, and the work done in cooperation with the Surgeon-General amounts to approximately $17,000. This covers the whole period of the war — 1917 and 1918.

Investigation and Standardization of Hospitals

One important work is that connected with the investigation and standardization of hospitals. This work may be regarded as having been begun in 1906, for at that time the first attempt was made to obtain a list of dependable hospitals in the various states. The work has been developing since that time, and an abundance of accurate data has been collected in regard to the number and character of hospitals, their bed capacity and the physicians on the attending staffs. The efforts toward standardizing the hospitals, especially those providing internships for medical graduates, is being energetically pressed, and in this movement the abundance of data collected will be of service. This work is described in detail in the report of the Council on Medical Education, it is mentioned here to emphasize its importance.

In the form of an addendum we give details regarding the circulation of The Journal; also details covering the finances of the Association, these being included in the Treasurer's and in the Auditor's report.

Respectfully submitted,

Frank Billings.
Thomas McDavitt.
D. Chester Brown.
Wendell C. Phillips.
Philip Marvel.
A. R. Mitchell.
H. Bert Ellis.
Oscar Dowling.
W. T. Sarles.

Addenda to Trustees' Report

SUBSCRIPTION DEPARTMENT

The regular weekly issue of The Journal of the American Medical Association from Jan. 1, 1918, to Dec. 31, 1918, inclusive (52 issues), was as follows:

January 5	67,668	
January 12	67,555	
January 19	67,425	
January 26	67,320	
		269,968
February 2	67,013	
February 9	67,171	
February 16	66,891	
February 23	67,447	
		268,522
March 2	66,565	
March 9	66,927	
March 16	67,137	
March 23	67,281	
March 30	66,591	
		334,501
April 6	67,168	
April 13	67,105	
April 20	67,554	
April 27	70,177	
		272,004
May 4	70,054	
May 11	75,262	
May 18	70,157	
May 25	67,127	
		282,600
June 1	67,104	
June 8	66,785	
June 15	66,563	
June 22	66,046	
June 29	66,116	
		332,614
July 6	66,026	
July 13	66,194	
July 20	66,559	
July 27	66,165	
		264,944
August 3	66,312	
August 10	66,145	
August 17	67,009	
August 24	65,909	
August 31	66,260	
		331,635
September 7	65,518	
September 14	65,574	
September 21	65,974	
September 28	66,038	
		263,104
October 5	65,991	
October 12	65,739	
October 19	65,939	
October 26	66,410	
		264,079
November 2	66,114	
November 9	66,196	
November 16	66,062	
November 23	66,371	
November 30	66,772	
		331,515
December 7	70,911	
December 14	71,200	
December 21	69,300	
December 28	67,950	
		279,361
Weekly average		67,209
Total		3,494,847

PERCENTAGE OF PHYSICIANS RECEIVING THE JOURNAL

The table below gives the number of physicians (based on the Sixth Edition of the American Medical Directory) in the United States, the number receiving The Journal, and the approximate percentage in each state. It does not include the copies to physicians in the U. S. Army, the U. S. Navy, the U. S. Public Health Service, etc.

State	Number Receiving Journal	Physicians in State 6th A. M. Dir.	Approx. Percentage 6th A. M. Dir.
Alabama	670	2,530	26
Arizona	234	333	70
Arkansas	636	2,587	25
California	2,859	5,929	48
Colorado	794	1,713	46
Connecticut	939	1,701	55
Delaware	97	264	33
District of Columl	616	1,237	50
Florida	401	1,296	32
Georgia	1,123	3,442	33
Idaho	212	458	46
Illinois	6,205	11,095	56
Indiana	1,645	4,765	32
Iowa	1,824	4,004	46
Kansas	1,236	2,668	46
Kentucky	1,010	3,483	29
Louisiana	699	2,060	34
Maine	422	1,179	36
Maryland	1,079	2,268	48
Massachusetts	2,999	5,926	51
Michigan	2,202	4,598	48
Minnesota	1,499	2,566	54
Mississippi	438	1,975	28
Missouri	2,061	6,063	34
Montana	301	661	46
Nebraska	921	1,960	47
Nevada	71	159	45
New Hampshire	311	666	49
New Jersey	1,481	3,152	47
New Mexico	210	456	46
New York	7,428	15,877	47
North Carolina	736	2,257	33
North Dakota	352	604	59
Ohio	3,194	8,089	39
Oklahoma	836	2,672	31
Oregon	495	1,157	43
Pennsylvania	5,230	11,495	46
Rhode Island	423	752	58
South Carolina	571	1,433	40
South Dakota	361	695	52
Tennessee	928	3,481	27
Texas	2,042	6,246	33
Utah	255	488	52
Vermont	227	653	34
Virginia	1,076	2,552	42
Washington	880	1,698	52
West Virginia	702	1,759	40
Wisconsin	1,455	2,817	52
Wyoming	134	254	60

The number of Fellows and subscribers on The Journal mailing list each year since 1900 (advertisers, exchanges, libraries, colleges, etc., omitted) is shown below.

Year	Fellows	Subscribers
January 1st, 1900	8,445	4,633
January 1st, 1901	9,841	8,339
January 1st, 1902	11,107	10,795
January 1st, 1903	12,553	12,378
January 1st, 1904	13,899	14,674
January 1st, 1905	17,570	15,698
January 1st, 1906	20,826	17,669
January 1st, 1907	26,255	20,166
January 1st, 1908	29,382	20,880
January 1st, 1909	31,999	18,983
January 1st, 1910	33,032	19,832
January 1st, 1911	33,540	20,504
January 1st, 1912	33,250	21,620
January 1st, 1913	36,082	19,863
January 1st, 1914	39,518	19,751
January 1st, 1915	41,254	20,430
January 1st, 1916	41,938	22,921
January 1st, 1917	42,744	22,156
January 1st, 1918	43,420	23,117
January 1st, 1919	42,366	24,687

During 1918 there were transferred to Fellowship 2,522 names from the Subscription Department, and fifty-nine from the Archives of Internal Medicine and the American Journal of Diseases of Children—a total of 2,581; 588 Fellows were discontinued as such, but were continued as subscribers.

Treasurer's Report

Report of the Treasurer of the American Medical Association for the year ended December 31, 1918.

ASSOCIATION RESERVE FUND

Reserve Fund as at December 31, 1917		$166,236.27
Investments		35,000.00
Interest—Bonds	$7,197.45	
Interest—Uninvested	293.66	
		7,491.11
Reserve Fund as at Dec. 31, 1918		$208,727.38

TREASURER'S GENERAL ACCOUNT

Balance as at Dec. 31, 1917	$ 256.62
Interest on Bank Balance	8.72
Balance as at Dec. 31, 1918	$ 265.34

DAVIS MEMORIAL FUND

Balance as at Dec. 31, 1917	$ 3,544.69
Interest received for the year	107.11
Balance as at Dec. 31, 1918	$ 3,651.80

Auditors' Report

Chicago, January 23, 1919.

To the Board of Trustees,
American Medical Association, Chicago, Illinois.
Dear Sirs:

In accordance with your instructions, we have audited the accounts of the American Medical Association for the year ended December 31, 1918, and now submit our report thereon.

SURPLUS ACCOUNT

The surplus at the beginning of the year amounted to $423,433.87, and the surplus at the end of the year amounted to $471,661.50, an increase of $48,227.63, which may be accounted for as follows:

Net Gain on Operations	$ 83,227.63
Less Transfer to Reserve Fund	35,000.00
Net Increase in Surplus	$ 48.227.63

The net increase in surplus is spread over the assets and liabilities as follows:

Increase in Assets:		
Current and Working Assets		$ 52,409.87
Prepaid Expenses		1,374.01
		$ 53,783.88
Less Decrease in Property and Equipment		4,595.87
		$ 49,188.01
Less Increase in Liabilities:		
Advance Payments on Publications	$ 2,092.81	
Less Decrease in Accounts Payable	1,132.43	
		960.38
Net Increase in Surplus, as above		$ 48,227.63

FINANCIAL POSITION

The financial position of the Association as at December 31, 1918, is shown in the following statement:

Balance Sheet as at Dec. 31, 1918

Assets:			
Property and Equipment at Cost, less Depreciations:			
Real Estate and Buildings			$ 231,463.59
Machinery			46,384.03
Type and Metals			9,087.19
Furniture and Equipment			13,385.97
Chemical Laboratory			1,415.62
Library			1,022.44
			$302,758.84
Reserve Fund Investment			208,727.38
Current and Working Assets:			
Inventory of Materials, Supplies and Work in Process		$ 51,395.42	
Accounts Receivable:			
Advertising	$ 25,187.06		
Cooperative Medical Advertising Bureau	5,717.20		
Reprints	2,405.47		
Miscellaneous	12,297.87		
		$ 45,607.60	
Notes Receivable		$ 124.00	
Directory, 6th Edition		16,000.00	
Cash in Bank and on Hand		64,434.56	
			$177,561.58
Prepaid Expenses:			
Advance on 1919 Publications		$ 1,569.33	
Insurance		958.77	
Session — 1919		90.09	
			2,618.19
Total			$691,665.99
Liabilities:			
Accounts Payable:			
Cooperative Medical Bureau			$ 6,390.56
Sundry			100.00
			$ 6,490.56
Advance Payments on Publications			4,786.55
Association Reserve Fund			208,727.38
Surplus			471,661.50
Total			$691,665.99

existence, but also for the formulation of plans for the future.

The Council on Health and Public Instruction was organized at St. Louis in 1910. During the reorganization period of the Association from 1902-1910, many independent committees had been created, dealing with closely related subjects but without any coordination or definite division of functions or jurisdiction. At the 1909 session, the section on hygiene and sanitary science asked the House of Delegates to create a permanent council on these subjects. The Reference Committee, to which this request was referred, called attention to the close relation existing between public education, medical and public health legislation and the development of hygiene and sanitation and recommended the appointment of a committee to consider the advisability of combining the functions of legislation, public instruction, organization and public sanitation in a permanent council. This committee was appointed and reported the following year, recommending the establishment of such a permanent council. The Council on Health and Public Instruction was accordingly created and appointed in June, 1910, and held its first meeting and organized in July of the same year. In it were merged the old committees on Medical Legislation, Public Instruction on Medical Subjects, Defense of Medical Research, Organization, Uniform Regulation of Membership, Visual Standards of Pilots, Public Health Education, Prevention of Blindness and Postgraduate Study. In 1911, the work of the Council consisted of the promotion of the work of Dr. J. N. McCormack, at that time engaged in organization work for the Association; in the development of a series of fifteen pamphlets on the Defense of Medical Research, which, in additon to thirteen already published, formed a standard series of twenty-eight monographs on this subject; in the development of a bureau on medical legislation by which it was hoped some of the problems in this field could be solved and in studying the problem of public education by state boards and other agencies through popular pamphlets.

The next session, in 1912, the Council reported that a Press Bureau had been organized and conducted during the past year, by which regular press bulletins had been sent to approximately 5,000 daily newspapers each week, the Speakers' Bureau had been organized and in the three months of its existence had supplied speakers for forty-four meetings; nine pamphlets on various public health subjects had been prepared, printed and distributed; a Handbook for Speakers on Public Health had been compiled, printed and distributed to the speakers of the Bureau. The Council also reported the organization, through cooperation with the National Electric Light Association and the American Institute of Electrical Engineers, of the Committee on Resuscitation after Electrical Shock; of the appointment, in cooperation with the National Education Association, of a Joint Committee on Health Problems in Education; of a Joint Committee on Medical Expert Testimony, consisting of representatives of the American Medical Association, the American Bar Association, the Commissioners on Uniform Laws; of a Committee on Rural Sanitation consisting of representatives of the American Medical Association, the Association of Railway Surgeons and the Conference of State and Provincial Boards of Health; of a Committee on Vital Statistic Legislation consisting of representatives of the American Medical Association, the American Public Health Association, the American Bar Association, Commissioners on Uniform Laws and the Bureau of the Census. In addition the Council had done much work along legislative lines and had represented the Association in a campaign for the establishment of a national department of health.

In 1913, the Council reported the continuation of these activities, showing that speakers had been furnished for 213 meetings during the year; that fourteen pamphlets had been prepared and distributed and that the various subcommittees of the Council had been functioning successfully during the year. A Committee on Resuscitation from Mine Gases, as the successor of the Committee on Resuscitation after Electrical Shock, had been created at the request of the Federal Bureau of Mines. These two committees had standardized the methods of artificial respiration and the treatment of the drowned and those suffering from gas, electric shock, etc.

In 1914, after four years of existence, the Council presented to the House of Delegates a definite program, in which it endeavored to formulate the duties and activities of the organized medical profession in the public health field. In outlining such a program, the Council assumed that the primary object of its existence was to place before the profession and the public of the United States the objects, purposes and work of the organized medical profession as represented by the American Medical Association and its constituent state and component county societies, so as to secure public support and endorsement of our efforts for the improvement of public health conditions in the United States. Three general lines of action were accordingly recommended. These were:

1. A thorough investigation of present public health conditions in the United States with the view to securing more accurate information on all phases of the public health problem than is now available.

2. Education of the public by every possible means in order that the people may understand the enormous advances in scientific medical knowledge during the last generation and the possibilities of utilizing such knowledge in the prevention of disease, the reduction of the death rate and the prolongation of human life.

3. The crystallizing of such educated sentiment in necessary public health laws which will render possible the conservation of human life commensurate with our advancing knowledge and will render such laws effective through the only force available in this country, namely, educated and enlightened public opinion.

Under the first head, namely, the investigation of the present public health situation, need for additional knowledge was subdivided into four classes, namely: (*a*) public health activities of the federal government; (*b*) state public health activities; (*c*) municipal health organization; (*d*) voluntary public health organization.

Under the second head, the education of the public, the Council reported the continuation of the Press Bureau, forty-two bulletins having been sent to 4,900 newspapers at a total cost of approximately $2,300. The Speakers' Bureau had been maintained during the year, speakers had been furnished for 133 meetings at a total cost of approximately $1,900, and a standard set of public health pamphlets had been prepared and published for the use of state boards. In addition a series of twenty pamphlets on Conservation of Vision had been prepared and issued by the subcommittee on this subject. This set of pamphlets has remained in use ever since and has been recognized as a standard in this field. A series of six pamphlets on cancer and its prevention had also been prepared and published. The total number of pamphlets issued during the year was 57,250.

In 1915, the Council reported the continuation of its program, particularly the carrying on of a comparative study of state public health activities by Dr. Charles V. Chapin, health commissioner of Providence, Rhode Island, as the special representative of the Council. Dr. Chapin's report was the first effort to collect data on state health activities with a view to the ultimate standardization and classification of state public health work. Regarding voluntary public health activities, the Council endeavored through a conference of representatives of the various voluntary organizations held in New York on March 13, 1915, to coordinate the numerous organizations in this field.. Along educational lines, the Council reported that, at the direction of the general manager, the mailing list of the Press Bulletin had been reduced to 2,200. Owing to the limited appropriation the amount available for the Speakers' Bureau had been limited to $1,000. For this amount speakers had been furnished for 151 meetings, an average expense of $9.80 a meeting. During the year 285,400 pamphlets have been printed and distributed.

In 1916, the Council reported further development of its program including the publication of Dr. Chapin's Report on State Public Health Work, with a rating sheet of the forty-eight state health organizations showing their comparative standing in different lines of state public health work, their appropriations, expenditures, etc. A preliminary edition of 1,000 copies of this report was distributed to members of state boards of health and officers of the Association for criticism and suggestions and the Council expressed the hope that at the end of two or three years a second survey might be made for confirmatory and comparative purposes. Owing to reduced appropriations, the Press Bulletin had been suspended, and the plan of the Speakers' Bureau had been modified by asking local organizations to pay the expenses of speakers instead of having these expenses borne by the Association. During the year, 1,133,500 pamphlets had been printed and distributed. Cooperative work had been carried on through the Elizabeth McCormick Memorial Fund and the dry-goods stores of the country for child welfare.

Before the next meeting of the Association, the United States had entered the world war. The New York meeting found all of the members of the Association largely absorbed in the war activities of the nation and the profession. The 1918 meeting showed a large proportion of the officers and members of the Association in uniform and in some field of active service. This condition continued up to November, 1918, and has been more or less true during the entire year, the medical officers being discharged slowly and returning to their civil activities. At the time of writing (April 23, 1919) there are still nearly 20,000 medical officers in the service. It will probably be the middle of summer or the early fall of 1919 before the medical profession is demobilized.

It becomes necessary, therefore, in planning for the reconstruction of the activities of the Council to reconsider the plans previously proposed and endorsed by the House of Delegates at successive sessions and to discuss them in the light of the actual accomplishments of the Council and its subcommittees. Regarding the general plan of public education carried on for a number of years through press bulletins, Speakers' Bureau, public meetings, distribution of pamphlets, leaflets, etc., these methods, while largely new at the time they were inaugurated, have been taken up by other organizations. It has been the policy of the Council not to undertake work that was being done by other organizations nor to attempt to compete with other organizations carrying on public health work, the desire of the Council being to inaugurate work that could not well be undertaken by other bodies and to coordinate existing organizations by drawing them together for a common purpose rather than to create or perpetuate any rivalry between existing organizations. It seems evident that the propaganda period in public health work is past. Many of our national health organizations, either special or general, as well as many of our state boards of health are now sending out press bulletins and much suitable health material is now being supplied to newspapers. It is, therefore, doubtful whether anything would be gained by the reestablishment of the Press Bureau. In fact, it seems highly probable that the continuation of this work can be safely left to special organizations.

The same thing is true regarding the Speakers Bureau. A large number of organizations, either local, state or national, have followed the lead of the American Medical Association in this particular in the last five years. It is especially doubtful whether with the limited resources of the Council it would be advisable to attempt the financing of speakers' expenses. As frequent requests for accredited speakers on public health topics continue to come to the Association headquarters, however, it would be advisable to prepare and maintain a list of representative physicians, members of the Association and recognized authorities on some phase of public health work who are willing to give public addresses on various occasions. In the great majority of cases, the local committees of organizations desiring speakers are perfectly willing to pay the necessary expenses of the speaker so that no appropriations for this purpose would be required. It is desirable, however, to prepare and issue each year a carefully selected list of speakers who are willing to fill a limited number of engagements and to distribute this list to women's clubs, local health organizations and other bodies desiring to secure speakers on some public health topic.

Regarding the distribution of pamphlets, this department of the Council's work, as shown by the summary included herein, has practically become self-supporting. By making a nominal charge for these pamphlets, especially when supplied in quantities, the money thus secured can be used over and over for printing educational material. Having once been prepared and stereotyped, the cost of printing involves only the cost of paper, ink, press work and labor. The complete list of pamphlets appended shows the scope of this line of work. This list can be with advantage considerably increased by the preparation of such pamphlets as are needed for the better education of the profession and the public. Several new pamphlets are now under consideration.

The increasing number of organizations interested in public health work accentuates the fact brought out by Pres. George E. Vincent of the Rockefeller Institute in his address before the American Public Health Association in December, 1918, that one of the most important needs in the public health field today is that of increased knowledge of public health conditions. Our knowledge even on fundamental health questions is fragmentary and in many cases based on insufficient foundation. Public health leaders are coming to recognize that improved conditions in the public health field cannot be brought about wholly by legislative enactment; that restrictive laws have only a limited value; and that the more accurate and complete our knowledge, the better can health conditions be controlled and improved through public sentiment rather than through restrictive legislation. Especially is it of the utmost importance that the American Medical Association, as the recognized official body of the American medical profession, should have clearly defined objects and purposes and should know definitely and accurately just what it is trying to accomplish and along what line its energies are to be exerted. Of the four general subdivisions found in the program of the Council as outlined in 1914, none of them has as yet been carefully or exhaustively studied. The fourth class, namely, voluntary public health organizations, is in practically the same condition as five years ago in spite of constant efforts to secure better coordination and cooperation. The American Public Health Association has recently taken up this question and has organized a Council composed of representatives of a number of the fifty-seven different national public health organizations in existence with a view to securing some kind of harmony and cooperation in this field. The creation of unnecessary organizations cannot well go much farther. The probable outcome will be the absorption of a large number of organizations by some single comprehensive body in the next few years. Whether this will come about by the occupation of this field by the American National Red Cross following its reorganization after the war or by the organization of some new general public health organization along popular lines remains to be seen. It is extremely doubtful, however, whether the Council or the American Medical Association can at present do very much to clarify this situation. It is also doubtful whether the purely educational activities of the Council can at present be enlarged to any great extent with any degree of success. There remains, therefore, one field in which the Council and the Association are preeminently fitted to exert themselves, namely, the increase of knowledge regarding organized public health activities.

In its report for 1914, the Council said, regarding the need of a careful study of the public health work of the federal government with a view to determining exactly what the federal government is doing and can do for public health: "The need for such an investigation hardly needs more than to be stated. The American Medical Association stands unreservedlly pledged to the securing at the earliest possible moment of an adequate national health organization. In the discussion of this subject . . . a lack of accurate and complete information regarding present health activities on the part of the federal government has been apparent. Extreme claims have been made on both sides, one set of advocates asserting that the United States government was doing more for public health than any other national government in the world, the other asserting that practically nothing was being done by our government which could compare with the health activities of European nations. Such a condition is not credible to a scientific organization."

This statement is as true today as it was five years ago. In addition, no careful study has ever been made, from a legal standpoint, of the exact limitations of the federal government along public health lines. What can the national government do under the constitution for public health? No one is today in a position to answer this question authoritatively. As a result, bills are drafted and measures proposed that would probably, if adopted, be unconstitutional, while such measures as the Harrison Narcotic Law, a law intended solely for the improvement of public health conditions in a broader sense, are passed ostensibly as revenue measures and are later by amendment converted into revenue producing measures with serious injustice and inconvenience to law-abiding physicians. If Congress has the power to regulate the sale of habit-forming drugs for the public good, then it is not necessary for Congress to pass such measures under the guise of revenue laws which after their passage are distorted and misconstrued by federal officials into unfair and inequitable revenue producing measures. This country will never have a federal department of public health such as has been advocated rather vaguely for fifty years past and such as is now being strongly advocated in England, Canada, Australia and other nations until the public health functions and powers of the federal government under the constitution have been definitely determined. Two questions must be answered: First, what can the federal government do for public health; and second, what is the federal government now doing for public health. These questions are not at present being considered by any other organization, yet their solution is fundamental to the development of public health in this country. They are problems to which the American Medical Association can fittingly and properly direct its attention. Having secured some authoritative information on these two questions, we will then be able to put the influence of the American Medical Association behind an intelligent movement for a national health organization. Correspondence has already been inaugurated with officials and influential members of the American Bar Association, looking toward the creation of a joint committee on the Constitutional Limitations of Federal Public Health Work.

Regarding the second field for investigation, that of state public health activities, the report of the Council in 1914 said, "There is today in every state in the Union some form of public health organization. Owing to our form of government, each of these organizations is working independently. As the reports of the various state boards are not made on a uniform basis, a comparison of their various activities and a tabulation of the results secured by their efforts are difficult. It is, therefore, practically impossible today to summarize the public health work which is being done by the different state boards of health, to compare one with another or to establish any standards by which their relative merits may be determined. The first necessity for such a comparative study is clearly a collection of authoritative official data on the subject." The report of Dr. Chapin, published by the Council and distributed two years later, is the only effort that has been made to obtain a comprehensive view of this field. The large number of requests that have been received for the limited edition of this report shows the value of such a study. The great majority of state board members and secretaries accepted this report for what it was intended to be, namely, an effort to secure, digest and tabulate authoritative, official information regarding state board of health activities with a view to showing the relative strength and weakness of public health work in each state, and thereby aiding the state health boards and secretaries in securing better laws and larger appropriations. It was not intended in any sense as a criticism of existing boards or of public health officials. In fact, in many cases it showed clearly that excellent results had been secured by state board secretaries under difficult conditions with small appropriations and limited powers. In a few instances, the statements made in the report or the conclusions drawn by Dr. Chapin were resented by sensitive state officials, in spite of the definite statement in the introduction that the object of the publication was not in any sense due to a desire to be either critical or dictatorial, but rather to present in tabulated form the essential facts regarding state public health work; in the hope that this material would be of service to state boards of health and executive secretaries in presenting to governors, legislators and executive committees a clear statement of the facts regarding public health work in each state, in order that the rating sheet might be of value in pointing out the weak points in each state by the strengthening of which the relative standing of the state in the public health field might be raised. The criticism and opposition encountered was of exactly the same character as that shown in the first years of the work of the Council on Medical Education by medical colleges found to be deficient in equipment, personnel or administration. This is to be expected in any such work and the arousing of such criticism is only an evidence of the value and necessity of the survey. With increasing interest in public health in all its phases, the increasing demands on state health organizations by the public and the enormously increasing opportunities for service that have developed during the past five years, it is more than ever desirable that this field should be more carefully, critically and persistently studied and discussed than has been the case heretofore. Here again no other organization has shown any disposition to take up this line of work. The federal government obviously will not undertake it and it is not desirable that it should since any investigation that it might carry on would necessarily be of an official character. Here again the parallelism with the work of the Council on Medical Education is apparent. The reason why the classification and standardization of medical colleges by the Council on Medical Education has been so brilliantly successful is that the Council had no legal standing or authority of any kind and assumed no such authority, restricting its efforts to collecting, tabulating and publishing the facts regarding medical colleges, leaving to public opinion, both in the profession and among the laity, the task of enforcing the findings of the Council.

In the third field of health activity, namely, municipal health organization, a still greater need for careful study exists. While there are only forty-eight states, each differing as to size, population, physical characteristics, material resources, industrial conditions and public health needs, there are 325 cities of over 25,000 with all possible varieties of health organization. Yet there is no basis of comparison by which it can be determined what form of health organization is best adapted for a city of 25,000, 50,000 or 100,000; how the health organization and the administration in one city compares with another; what the legitimate expense of proper health administration in a city of a certain size should be; what the functions properly undertaken by a city health department should be or how these should be related to a state health organization; or whether or not the people of any city are receiving an adequate return for the amount of money paid out for health purposes. For the city that desires to improve its health organization or to establish one de novo, there is no information as to what kind of health organization such a city should have; what should be its personnel or equipment; how much money should be appropriated; or what duties or activities should be imposed on it. An effort has been made by the American Public Health Association in the last few years to discuss this question and to formulate some general principles. No comprehensive study of the question, however, has as yet been made. The plans of the Council provide for a comparative study of the health organization and activities of our various cities in the hope of being able to establish standards for such work for groups of cities of different sizes, to compare the public health work done in our leading cities and by such standardization and comparison to stimulate and encourage better health organization in our American municipalities.

Another task taken up by the Council was a study of the legal relations and responsibilities of physicians and the legal aspects of public health. This field, for obvious reasons, has never been carefully studied either by physicians or lawyers. It offers no prospect of financial reward to lawyers and it is only of interest to physicians so far as their personal interests are involved in some specific case. The Secretary has for many years collected a large amount of material on this subject. One volume of a proposed four-volume set was issued in 1915, namely, "Digest of Supreme Court Decisions on Medical Practice Acts," in which were indexed 752 court decisions on this subject, 396 of which were abstracted. Work was begun and nearly completed on the second volume, "A Digest on the Medicolegal Relations of Physicians," for which approximately 1,800 supreme court decisions were collected and abstracted. This work can probably be completed and prepared for publication in a few months. In the field of malpractice, there are probably 1,500 cases on record which have gone to courts of last resort for opinions, while on the fourth subject, "The Powers and Duties of State Boards of Health," there are approximately 800 decisions on record. This work should be completed and published, as it comprises material that is not available in any other form nor through any other agency.

Summing up the program of the Council submitted to and approved by the House of Delegates in previous reports and eliminating those activities that have been taken over by other agencies or that time and experience have shown not to be desirable of development, we find that there remains the following work definitely belonging to the Council:

1. The routine work of the Secretary's office, consisting of the preparation, printing and distribution through all available channels, of public health educational literature, of the coordinating, so far as possible, of other public health organizations through interlocking committees; of the representing of the American Medical Association in the public health field and in various conventions, conferences and meetings; of the carrying on of the routine correspondence of the Council, including the furnishing of information on all available public health topics to physicians and laymen interested; and of the maintenance and distribution of a speakers' list, from which can be secured speakers of professional standing for public occasions of all kinds.

2. The completion of the medicolegal work begun, involving the publication, first of the "Digest of Supreme Court Decisions on the Medicolegal Relations of Physicians"; second, of the "Digest on Powers and Duties of State Boards of Health"; and third, of the "Digest on Professional Responsibility and Malpractice."

3. A study of (*a*) federal public health activities and limitations, (*b*) state public health activities and organizations, (*c*) municipal health organizations, with a view to presenting to the public and the profession the facts regarding existing conditions and the lines in which practical and feasible reforms and advances in this field can be carried out and the use of the influence of the Association and profession to secure such reforms.

The development of this program will necessarily be limited to the Council's resources, which again will be dependent on the appropriations made for this purpose by the Board of Trustees, which in turn will be necessarily limited to the financial resources of the Association. It will probably be necessary for the Council to take up these different lines of work successively rather than simultaneously and to undertake one thing at a time, completing that work before another line of activity is undertaken. The program outlined above, therefore, will probably involve a number of years. It is submitted herewith to the House of Delegates as a tentative program for criticism, modification or approval as the House of Delegates may see fit.

INCREASED TAXATION UNDER THE HARRISON LAW

During the past year the registration tax for physicians under the Harrison Law has been increased from $1 to $3. You are all familiar with the history of the passage of this law. Enacted by Congress to carry out our international obligations in compliance with the recommendations of the Shanghai Commission on the Control of the Opium Traffic, it was put in the form of a revenue measure simply to give Congress jurisdiction. THE JOURNAL and the American Medical Association cooperated heartily and cheerfully in securing the passage of this measure. The medical profession of the country as a class accepted the imposition of a nominal registration tax and the inconveniences connected with the operation of the law as necessary accompaniments of any practical plan for the control of illegitimate traffic in habit-forming drugs. In the revenue bill for 1918, however, a new tax schedule was provided increasing the tax on physicians from $1 to $3. This is simply an effort on the part of the Department of Internal Revenue to make a revenue-producing measure out of what was originally and legitimately intended for a restrictive law for the public good. The law will not be any more effective in its operation under a $3 tax than it was under a $1 tax while it will impose an additional burden of about $300,000 on physicians. The only justification of the law is the public good. The expenses of its administration should be paid out of the public funds and not out of a special tax levied on one particular class. While the increase in the amount of the tax might be justified as a war measure, now that the war is over there is no possible justification for it. The Council, therefore, recommends that the House of Delegates record its emphatic disapproval of this unjustifiable attempt to exploit physicians and that it demand the reduction of the registration fee for physicians to a nominal amount.

VITAL STATISTIC LEGISLATION

Probably the most successful, in fact the only successful, effort that the American Medical Association has made in late years to influence legislation is now happily nearing completion. Although the Association very early in its history recommended the passage of suitable laws in the different states for the registration of births and deaths, nothing effective was done on this subject until 1906. At that time the registration area for deaths established by the Federal Bureau of the Census consisted of only ten states, namely, New England, comprising Maine, Vermont, New Hampshire, Massachusetts, Rhode Island and Connecticut, and New York and New Jersey in the east with Michigan and Indiana the only other states represented. The difficulty had been that legislation on this subject had been left entirely to state initiative and any laws that might be adopted by the different states were so divergent in principles and details as to make any adequate compilation of birth and death reports for the different states impossible. Dr. Cressy L. Wilbur, at that time chief statistician of the Division of Vital Statistics of the Bureau of the Census, had become thoroughly discouraged and was about ready to give up any further efforts for better conditions. Yet the importance of vital statistics legislation as underlying any adequate and efficient state health organization was apparent. It seemed evident that the passage of a model standard law on this subject by each state was absolutely fundamental to public health progress. Accordingly this matter was taken up by the Committee on Medical Legislation, one of the forerunners of the present Council. The newly adopted Pennsylvania law which had been very carefully drafted was taken as a model. A Joint Committee was organized through cooperation with the American Public Health Association and a model bill was drafted, this being one of the few subjects on which it is possible to draft a standard bill suitable for adoption by every state. Endorsement of the model bill was then secured from the American Medical Association, the Federal Census Bureau, the American Public Health Association, the American Statistical Association, the American Bar Association, the American Federation of Labor, the National Conservation Congress, the General Federation of Women's Clubs and other national organizations interested. A plan was adopted involving the selection of not more than two or three states each year, the education and stimulation of public opinion by the distribution of pamphlets, editorials and other material for a year or more previous to the introduction of the bill, the arousing and coordinating of all the organizations and interests in the state and in general the creation of a real public sentiment in favor of suitable legislation.

information in regard to standards of medical education and licensure.

(*d*) Prior to 1909, detailed information in regard to medical students was not obtained until the year they came up for graduation. The Council was then impressed with the importance of securing the necessary detailed information at the time the student matriculated. A Medical Students' Register has been maintained since 1910 and in this work the Council has had the most gratifying cooperation on the part of deans of medical colleges. The information obtained includes a report of all new students admitted each year and a report from each individual student giving the date of birth and a complete educational history. The information is kept on cards and as soon as the student has graduated and obtained his license this card is transferred to the biographical index and the data regarding the graduate is included in the next edition of the American Medical Directory.

II. Annual Conferences

What was probably the most effective procedure in the Council's work was the Annual Conference on Medical Education and Licensure which has been held every year since 1904 when the Council was created. Through this conference the Council secured the advice and cooperation of university presidents, medical educators, members of state licensing boards and other interested individuals by means of which standards of medical education and licensure, after careful discussion, were generally adopted. These conferences have grown from the standpoint of both attendance and influence. Since 1911 the two confederations of state licensing boards—now merged into one—and the Association of American Medical Colleges have held their annual meetings in Chicago in conjunction with this annual conference.

III. Educational Standards

In 1904 two educational standards were established by the Council. One of them, suggested for immediate adoption by colleges and licensing boards, advocated an admission requirement of a four-year high school education, a four-year medical course of at least thirty weeks of actual work each year, and the passing of an examination before a licensing board. The other, an "Ideal Standard" intended for adoption at a later time, advocated a preliminary education of one year of college work in addition to a high school education, a four-year medical course, and a fifth year to be spent by the student as an intern in a hospital. In 1909, a "model medical curriculum" was prepared by a special committee of 100 under the direction of the Council. In 1913 a schedule of subjects to be included in the one-year collegiate course was prepared by a special committee of the Council in conjunction with a similar committee of the Association of American Medical Colleges. In February, 1917, after an extensive correspondence with college presidents, university examiners and with other educational experts, a special committee of the Council prepared a suggestive schedule of subjects for inclusion in a two-year premedical college course. This standard has been widely endorsed by colleges and universities and by the Association of American Medical Colleges.

The Council's work in connection with the above standards has had a profound influence not only on medical schools but also on general education. (*a*) In 1910 the Council collected information preparatory to publishing a list of accredited high schools, but on learning that the United States Bureau of Education was willing to publish it, the Council's data were turned over to that Bureau. (*b*) With the increase of the entrance requirements of medical schools to two years of college work, it became important to know which of the thousand or more institutions bearing the name of "college" or "university" were worthy of recognition as such. The Council, therefore, has been cooperating with the various agencies having to do with the standardization of colleges in an effort to secure a reliable list of approved institutions. Since 1917 the Council has published two tentative lists of colleges and junior colleges which have been approved by the North Central and Southern Associations of Colleges and Secondary Schools and the Association of American Universities. Similar organizations in other sections of the country are being urged to adopt similar lists so that a list of all colleges in the country which are worthy of approval can be listed.

IV. Preliminary Education

(*a*) In 1904 only about 25 per cent. of all medical schools were actually requiring a four-year high school education as their minimum requirement for admission. In that year the Council urged that all medical schools adopt that standard as a minimum.

(*b*) In 1904, also, the requirement of one year of college work was urged for future adoption. Educators at first thought it could be generally adopted by Jan. 1, 1908, but on account of conditions in the South, the time was extended to Jan. 1, 1910. It was made a requisite for the Class A rating on Jan. 1, 1914.

(*c*) In 1907 an extensive correspondence with colleges of arts and sciences revealed the fact that a requirement of two years of college work would fit in better with the scheme of collegiate education in the United States. It harmonized with the arrangement for the six-year combined course adopted by many universities for the degrees of B.S. and M.D.; it provided time for other useful subjects and culture courses, such as psychology, modern language, more English, etc., and avoided unnecessary friction in the acceptance of high school credits. It was found also that the two-year standard would place premedical education in this country on a par with that required in the leading foreign countries. In 1916, largely through the efforts of the Council, the two-year requirement had been adopted by forty-six medical schools and by seventeen state licensing boards, which justified the action taken in that year by the House of Delegates instructing the Council to make it a requisite for the Class A rating, beginning Jan. 1, 1918. This standard of preliminary education is now required for admission by every medical college rated in Classes A and B by the Council and has been adopted by thirty-two state licensing boards. This higher requirement by medical colleges is not "on paper only," since all colleges are now sending reports showing the entrance qualifications of their students, which enables the Council to verify the data in each individual case.

The increase in the standards of preliminary education and the adding to the medical course of a year of hospital work bring the completion of the medical course by the student at a too advanced age. This makes it important for a further cooperation by the Council with educational agencies in an effort to shorten the period of elementary and secondary education so as to save two years of the student's time. This will bring education in the United States more into conformity with systems of education in other leading countries.

V. Inspection and Classification of Medical Schools

(*a*) The first tour of the inspection of medical schools was made by the Council during the session of 1906-1907, when 162 medical schools were existing. On the basis of the data collected, the colleges were graded on a civil service basis on a scale of 100 per cent. and were classified in accordance as they obtained a rating: A, above 70 per cent.; B, between 70 and 50 per cent., and C, below 50 per cent. This classification was read at the annual conference in 1907 and in the same year to the House of Delegates of the American Medical Association. It was not published, but each medical college was notified in regard to its classification.

(*b*) The second tour of inspection was made during the session of 1909-1910, which included also the medical schools of Canada. At that time there were 144 medical schools in the United States and 8 in Canada. During the previous four years, 40 medical schools had ceased to exist, including 24 which had merged with others and 16 which became extinct. During the same time, however, 22 new institutions had been organized, making a net reduction of 18 colleges. It was during this second tour of inspection by the Council that Mr. Flexner prepared his report for the Carnegie Foundation. In fact, most of the inspections on this tour were made jointly by Mr. Flexner and the Secretary of the Council. The classification based on this inspection was included in the Council's report to the House of Delegates and was ordered published.

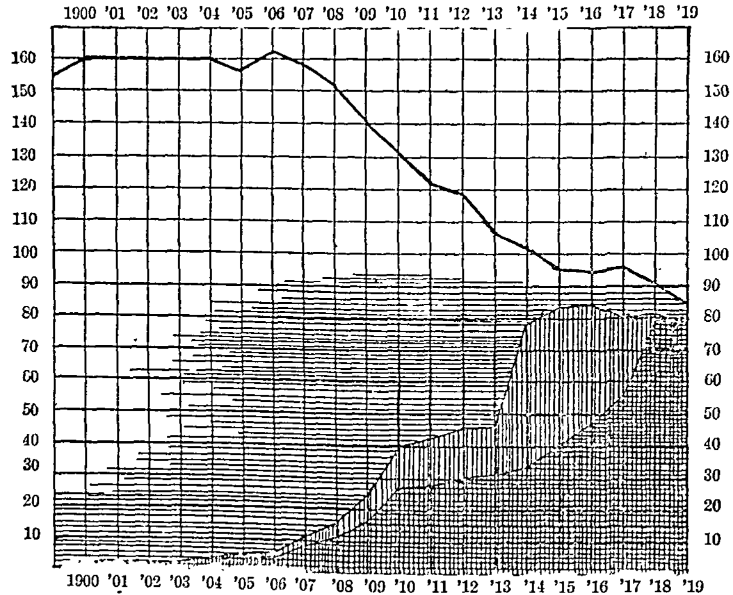
(*c*) The third inspection of medical schools was made during 1911-1912. The institutions rated in Class A were subdivided between those rated in A + and others in A, mainly because the institutions in the latter division had not voluntarily adopted the higher entrance requirement. In most instances, however, there were other serious defects.

(*d*) The fourth general inspection, which also included the colleges of Canada, was made during the session 1913-1914. At this time practically all colleges had adopted the requirement of one year of collegiate work for admission, so that the A + classification was discontinued and the colleges, as formerly, were grouped in Classes A, B. and C.

(*e*) A fifth classification had been planned for 1914 but was postponed owing to the general adoption of the one year of collegiate work for admission by a large number of institutions. It was decided to allow the medical schools time for readjustment under the higher standard. The reclassification was then planned for 1916, but was further postponed to 1918, owing to the rapidly increasing number of schools which were adopting the two-year standard of collegiate work which went into effect for all Class A medical schools Jan. 1, 1918. Then came the confusion due to the war, which made it advisable to further postpone the general reclassification. The time now seems opportune to make another general inspection and reclassification of all medical schools.

CHART 1.—MEDICAL SCHOOLS AND ENTRANCE REQUIREMENTS

This chart shows (heavy line at the top) the total numbers of medical schools existing in the various years. The chart also shows the numbers of medical schools requiring for admission (horizontal shading, indefinite, [illegible] high school education; (vertical shading) one [illegible] llege work and (heavy shading) two years of [illegible] k in the years indicated respecively by the vertical lines.



	1900	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19
Totals	160	160	160	160	160	158	162	139	151	140	131	132	118	107	106	96	95	96	90	85
Totals (a)	158	158	158	157	156	153	156	148	135	116	91	80	72	60	24	12	10	10	9	6
Totals (b)	..	..	..	..	..	..	1	2	5	8	13	14	16	16	44	44	38	30	1	..
Totals (c)	2	2	2	3	4	5	5	9	11	16	27	28	30	31	34	40	47	56	80	79

Requiring for admission (*a*) a high school education *or less;* (*b*) one year of college work; (*c*) two or more years of college work.

During the visits to medical colleges, in cities where two or more medical colleges were existing, mergers were urged by the inspectors so that in each instance one invariably stronger and better equipped medical school might result. By the end of 1918 the total number of medical schools had been reduced from 162 to 85 and of the latter number all but 6 had adopted the requirement of two or more years of collegiate work for admission. As stated in former reports, this country in 1904 had more medical schools than all the rest of the world. Between 1904 and 1919, therefore, the supply had been reduced to more nearly the normal number for the needs of the United States, but on the other hand, the institutions were greatly improved, not only in their entrance requirements but also in every other respect. The reduction in the numbers of medical schools and the progress in the adoption of higher entrance requirements are shown in Chart 1. It will be noted that great progress had already been made—both in the reduction in the total number of medical colleges and in the greatly increased number which had adopted higher entrance requirements—before 1910 when Mr. Abraham Flexner's report was published by the Carnegie Foundation for the Advancement of Teaching. With all due credit to the Carnegie Foundation for that excellent report and for the beneficial effect it produced in attracting public attention to the needs of medical education, it will be remembered that the Foundation suggested no standards and published no classification of colleges. As clearly shown in the chart, the great changes in medical education had their beginning in, and are mainly due to, the efforts of the organized profession, the American Medical Association, to put its own house in order.

VI. IMPROVING MEDICAL EDUCATION

(*a*) With the higher entrance requirements better qualified students are being enrolled in the medical schools. The campaign for improvement carried on by the Council has resulted also in providing a better medical training than was furnished in earlier years. As a result of the investigations and classifications and the publicity given to the conditions found more endowments for medical education were secured, better medical buildings were erected, new and improved laboratories were added, better equipment was provided and larger staffs of expert all-time laboratory teachers were employed.

(*b*) A careful study and revision of the medical curriculum has resulted in a better apportionment of time to the various subjects of the curriculum so that those subjects are now being taught in a more logical sequence.

(*c*) Medical faculties are better organized, which means that there is a better working organization of the instructors by departments—those teaching anatomy, physiology, chemistry, medicine, surgery, etc.

(*d*) During the fourteen years better and closer relations have been established between medical schools and hospitals; methods of clinical instruction have been greatly improved by the division of classes into small sections for ward work, clinical clerkships, etc.

VII. THE COUNCIL'S WORK AND THE WAR

Attention was called in the Council's report last year to the result of its work in connection with the world war. The facts are briefly emphasized as follows:

(*a*) Of the 20,678 students who graduated during the last six years, 15,025, or 72.6 per cent., were admitted under the higher entrance requirements, received their training in and graduated from the Class A medical schools, in which the great improvements in recent years had been most pronounced. It is the graduates of these recent years who in the largest proportions entered the government medical services. As a result, the American soldiers and sailors were attended by a larger proportion of medical officers who had had a modern medical training than they would have obtained had it not been for the Council's campaign for an improved medical education.

(*b*) At the headquarters of the American Medical Association, in the Council's files, the Students' Register and the Biographical Index, there is information regarding medical students and graduates which is not available elsewhere. This information was placed at the service of the Surgeon-General and as a part of the routine in the commissioning of medical officers, lists of applicants were sent to the Association for verification of their graduation and license. In 1917, through the possession of the Students' Register, unanswerable arguments were advanced favoring the exemption of medical students from the draft and, as a result, the Medical Enlisted Reserve Corps was established.

(*c*) The data available made it possible also to publish the Honor Roll and to conduct an energetic campaign toward securing the enlistment of larger numbers of physicians in the government medical services.

VIII. Graduate Medical Instruction

The world war has emphasized the great need of better facilities for graduate medical instruction in the United States. Such facilities were in great demand by medical officers as they were being released from active duty since that presented an excellent opportunity for them to take up certain courses of graduate study before returning to active practice. Improved facilities for graduate work are also important to meet the demands of our neighbors in the Spanish countries of Central and South America. The development of graduate work is an important subject to consider in connection with the efforts to standardize hospitals.

IX. Medical Cults

An important matter, which affects the relationship between the public and the practice of medicine and which is a problem directly concerned with medical education and medical licensure, is the existence and practice of the various pseudomedical cults, represented by osteopaths, chiropractors, naprapaths, spondylotherapists, neuropaths, psycultopaths, etc. Most of the teaching institutions turning out such practitioners have been inspected by the Secretary of the Council while on his various tours of inspecting medical schools. Files of information in regard to these institutions have been kept, which include catalogs, printed literature, circular letters, inspection reports, etc. The problem has been given sufficient study so that the following reliable statements can be made:

(*a*) The only logical argument to be made against practitioners of these cults is their lack of education. Such training as they have received has been in institutions requiring little or no educational qualifications for admission, and under faculties made up almost entirely of those who have not had a complete medical training. Graduate nurses could, with far greater justice, ask the right to treat human disorders than could the followers of these cults, because nurses are largely taught by physicians and secure their training in hospitals where all types of disease are treated by physicians.

(*b*) Before the recent improvements were made in medical education, many of the medical schools were very little better, from the standpoint of buildings, equipment and teaching facilities, than the better pseudomedical cult institutions. In the former, however, all instructors were those who had received a training in all the branches of medicine. Under the greatly improved conditions brought about in the last fifteen years, there is now so marked a distinction between the education and training of physicians as compared with those of the cult practitioners, that any intelligent layman can note the difference.

(*c*) The medical profession is justified in objecting to the various cults, not because of their peculiar systems of practicing, but because of their serious lack of education and the fact that they are seeking the right to practice as physicians without meeting the same educational standards with which physicians have to comply. If such practitioners wish to appear before the public as physicians and surgeons and to assume all responsibilities of such, then they should not object to being measured by the same standards and submitting to the same tests.

(*d*) The work of the Council in connection with low-grade medical colleges, drugless cult institutions and diploma mills has called attention to the lack of adequate safeguards over the chartering of educational institutions in the various states. In all but a few states any group of individuals for a small fee can secure a charter to open an educational institution and to grant all the degrees in the category, no questions being asked in regard to ability, financially or educationally, to furnish the education usually required for such degrees. Attention to the need of such safeguards was called by the Secretary in his report to the Council in 1916. Reprints of this report were sent to the educational authorities in each state, and a growing interest is being manifested toward the securing of the laws needed to establish such safeguards.

K. Hospital Standardization

(*a*) The "Ideal Standard," established by the Council in 1904, included among its requirements a fifth year to be spent by the student as an intern in a hospital. The Council, therefore, has always had a special interest in the number and character of hospitals. Since 1905 brief reports have been obtained each year from all hospitals as a basis for the lists published in the successive editions of the American Medical Directory. The information included merely the name, character and location of the hospital, the number of beds and the name of the superintendent. Copies of the hospitals' annual reports were asked for and were received from many of the larger hospitals. Much information was obtained from other sources regarding the reputation of the various institutions. Information in the Biographical Index gave other important data regarding the qualifications of the physicians on the hospital staffs. During the various tours of inspection, hospitals connected with medical schools were inspected by the Secretary of the Council, and first-hand information obtained regarding the number of interns and the character of their training.

(*b*) During 1912-1913 a carefully worded questionnaire was sent to 2,424 hospitals having twenty-five or more beds. Reports were received from 2,185, and of this number 852 were regularly using interns, providing places for 3,006 interns.[1] The report showed that the hospitals did not provide sufficient places for the 3,981 students who graduated in that year. Based on the information from this questionnaire and from the inspections made, the Council published in 1914 its first provisional list of hospitals considered in position to furnish acceptable internships. With the revisions made by state advisory committees, only 532 hospitals w[illegible] [illegible]m-mended in this first list, and internships i[illegible] able for 2,148 graduates each yea[illegible] begun and continued by the

(*c*) A second survey was [illegible] [illegible]nued during 1915. New ad[illegible] in the student's time. [illegible] various state medic[illegible] United States more into c[illegible] committees—th[illegible] of education in other leading countr[illegible] tematically [illegible]ACTION AND CLASSIFICATION OF MEDICAL SCHO[illegible] limited extent inspec[illegible] the advisory committees and teaching hospitals were inspected by the Secretary. The list of hospitals based on this second survey, which was published in August, 1916, was much more reliable than the first, and contained the names of 687 hospitals which provided internships for 3,340 graduates each year—more than could be supplied. By this time, as a result of the constant agitation by the Council, the intern year had been adopted as a requirement for the degree by eight medical schools and as a prerequisite for the license by eight licensing boards.

(*d*) The third survey of hospitals was begun in April, 1918. The state advisory committees were strengthened, or their membership renewed, through correspondence with state medical associations. The third questionnaire was sent to 1,126 hospitals, and an abundance of up-to-date information has been secured from this and other sources. Annual reports from the majority of the institutions have been obtained, and reports from hospitals are pouring in, giving the names of the physicians who are members of the attending and consulting staffs.

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[1] See "Preliminary Report on the Standardization of Hospitals," American Medical Association Bulletin, March 15, 1915, p. 316.

WORK OF THE PAST YEAR

THE THIRD SURVEY OF HOSPITALS

In October, 1918, there were in the United States 6,440 hospitals having ten or more beds, or a total capacity of 758,442 beds. The distribution of these by states is shown in Table 1. Of these hospitals, 4,927 have from 10 to 100 beds; 817 have from 100 to 200; 447 have from 200 to 500, and 277 have over 500 beds.

TABLE 1.—HOSPITALS IN UNITED STATES

State	Total No.	10 to 100 Beds	101 to 200 Beds	201 to 500 Beds	500 or More Beds	Total Beds	Hospitals Having or Seeking Interns	
	10 or More Beds						No.	Beds
Alabama	73	64	6	1	2	5,698	14	3,790
Arizona	47	47	.....	.....	.....	1,638	2	191
Arkansas	50	42	3	4	1	5,203	7	2,155
California	373	307	34	18	14	26,817	49	2,096
Colorado	110	89	13	6	2	8,803	16	3,781
Connecticut	75	54	12	7	2	10,991	22	4,133
Delaware	13	10	2	1	.....	791	2	264
Dist. Columbia	39	20	12	5	2	8,923	17	6,014
Florida	47	42	4	.....	1	3,415	4	398
Georgia	93	77	11	3	2	10.236	18	3,462
Idaho	38	33	2	3	.....	2,021	1	30
Illinois	352	259	54	25	14	52,809	86	23,870
Indiana	177	143	21	8	5	15,166	29	7,391
Iowa	201	171	14	12	4	15,769	21	7,427
Kansas	65	51	4	6	4	8,357	15	2.896
Kentucky	114	92	9	10	3	13,059	17	4,857
Louisiana	70	51	11	5	3	8,856	18	4,600
Maine	64	51	8	3	2	5,285	11	3,030
Maryland	122	81	22	11	8	16,551	35	7,275
Massachusetts	373	289	33	34	17	47,192	65	20,676
Michigan	121	79	22	11	9	24.275	34	9,534
Minnesota	224	188	23	6	7	18,578	24	4,698
Mississippi	43	37	4	.....	2	4,175	5	508
Missouri	192	139	37	8	8	23,746	34	4,261
Montana	64	53	9	1	1	4,564	6	1.606
Nebraska	100	82	12	3	3	8,394	18	1,862
Nevada	26	25	.....	1	.....	887	.....	.....
New Hampshire	63	50	9	2	2	5,741	4	1,200
New Jersey	184	116	42	21	5	24,128	37	6,371
New Mexico	46	43	.....	3	.....	2,460	2	67
New York	709	462	102	96	49	141,965	166	61,733
North Carolina	105	95	7	.....	3	7,610	15	2,012
North Dakota	54	50	2	1	1	4,404	2	1,340
Ohio	305	219	44	26	16	43,324	50	14,121
Oklahoma	71	63	2	3	3	5,493	8	1,464
Oregon	85	73	5	5	2	6 967	7	810
Pennsylvania	474	320	83	44	27	73 003	125	26,784
Rhode Island	50	33	9	5	3	7,309	9	3 501
South Carolina	44	38	3	2	1	4,554	7	2,707
South Dakota	55	50	2	2	1	4.033	3	225
Tennessee	106	82	14	7	3	9 595	18	2,003
Texas	197	169	14	8	6	18 903	22	6,422
Utah	27	17	8	2	.....	2,206	5	732
Vermont	36	31	1	3	1	2,796	4	686
Virginia	109	88	8	8	5	2,101	26	2,101
Washington	133	111	13	5	4	11,188	10	1,801
West Virginia	75	65	5	2	3	6,246	10	711
Wisconsin	218	150	45	17	6	20.965	23	2,313
Wyoming	28	26	.....	2	.....	1,252	3	179
Totals	6 440	4.927	800	456	257	758,442	1,126	270,401
Percentage	100.0	76.5	12.4	7.1	4.0	100.0	17.4	35.6

From the 6.440 hospitals reports showed that only 1.126, or 17.4 per cent. desired or were using interns. A special questionnaire was sent to these 1,126 hospitals and 1,005 responses have been received. Of these replies, 801 included statements in sufficient detail to permit their use in the tabulations shown in Tables 2 and 3 and in Chart 2.

Blanks inquiring data in regard to interns sent to all hospitals brought the information that 5,342, or 82.6 per cent., did not use interns, and only 1,126, or 17.4 per cent., were using or desired to have them. These 1,126 hospitals, however, include the larger institutions, and have 35.6 per cent. of the total bed capacity.

There are 274 more hospitals desiring interns than were listed in 1913, and 439 more than were listed in 1916. These have a total number of 270,401 beds (including eighty-four hospitals for the insane, with 97,421 beds). At the rate of thirty beds per intern for the general hospitals and a total of 174 interns in the state hospitals, places are provided for 5,940 interns or resident physicians, as compared with 3,566 in 1913 and 4,057 in 1916. This shows the remarkable increase in the appreciation of and demand for interns; it shows also the utter impossibility of graduating a sufficient number of medical students to meet the demand, even if we should multiply by four the number of physicians now graduating annually from our medical schools; it shows the necessity of employing house physicians, or of providing special assistants, who will do much of the work heretofore devolving on the intern.

Of the 6,440 hospitals in the United States about a year ago, a special questionnaire was sent to the 1,126 which had reported that they were using or seeking interns, replies have been received from 1,040. Of these replies, 801 gave specific replies to the questions asked. These replies in regard to the character of the hospital, hospital equipment and records have been tabulated and are show in Tables 2 and 3.

CHARACTER OF HOSPITALS

Of the 801 hospitals from which replies were received, 636, or about 80 per cent., are general hospitals, the remainder being devoted to the twelve special lines, as shown in Table 2.

TABLE 2.—CHARACTER OF HOSPITALS SEEKING INTERNS

State	No. of Hospitals Reporting	General	Nervous and Mental	Tuberculosis	Children's	Infant's	Maternity	Eye, Ear, Nose and Throat	Contagious	Skin and Cancer	Orthopedic	Surgical Only	Emergency	Drug Addicts
Alabama	13	10	2	....	....	....	....	....	....	...	...	1	...	...
Arizona	2	2	....	....	....	....	....	....	....	...	...	...	...	...
Arkansas	2	1	1	....	....	....	....	....	....	...	...	...	...	...
California	30	25	3	1	1	....	....	....	....	...	...	...	...	...
Colorado	10	10	....	....	....	....	....	....	....	...	...	...	...	...
Connecticut	14	13	....	1	....	....	....	....	....	...	...	...	...	...
Delaware	2	2	....	....	....	....	....	....	....	...	...	...	...	...
Dist. of Columbia	15	11	1	1	....	....	1	1	....	...	...	...	...	...
Florida	2	2	....	....	....	....	....	....	....	...	...	...	...	...
Georgia	14	12	1	1	....	....	....	....	....	...	...	...	...	...
Idaho	1	1	....	....	....	....	....	....	....	...	...	...	...	...
Illinois	63	52	2	1	1	....	2	2	1	...	1	...	1	...
Indiana	13	10	2	1	....	....	....	....	....	...	...	...	...	...
Iowa	12	9	2	1	....	....	....	....	....	...	...	...	...	...
Kansas	10	7	2	1	....	....	....	....	....	...	...	...	...	...
Kentucky	12	9	....	1	....	....	....	....	....	...	...	2	...	...
Louisiana	14	12	1	....	....	....	1	....	....	...	...	...	...	...
Maine	8	5	2	1	....	....	....	....	....	...	...	...	...	...
Maryland	26	15	1	4	3	....	1	2	....	...	...	...	...	...
Massachusetts	49	37	4	3	1	1	1	1	....	...	...	...	...	1
Michigan	22	16	5	....	1	....	....	....	....	...	...	...	...	...
Minnesota	20	16	....	1	1	....	....	....	....	...	...	2	...	...
Mississippi	4	3	....	1	....	....	....	....	....	...	...	...	...	...
Missouri	23	21	....	....	1	....	....	....	....	1	...	...	...	...
Montana	4	4	....	....	....	....	....	....	....	...	...	...	...	...
Nebraska	9	9	....	....	....	....	....	....	....	...	...	...	...	...
Nevada	0	0	....	....	....	....	....	....	....	...	...	...	...	...
New Hampshire	1	1	....	....	....	....	....	....	....	...	...	...	...	...
New Jersey	31	28	1	....	1	....	....	....	1	...	...	...	...	...
New Mexico	2	2	....	....	....	....	....	....	....	...	...	...	...	...
New York	134	88	12	10	6	....	6	3	3	2	3	...	1	...
North Carolina	9	6	2	1	....	....	....	....	....	...	...	...	...	...
North Dakota	1	1	....	....	....	....	....	....	....	...	...	...	...	...
Ohio	31	26	2	....	2	....	1	....	....	...	...	...	...	...
Oklahoma	5	4	1	....	....	....	....	....	....	...	...	...	...	...
Oregon	2	2	....	....	....	....	....	....	....	...	...	...	...	...
Pennsylvania	99	83	3	1	5	....	4	2	....	...	1	...	...	...
Rhode Island	7	5	....	....	....	....	1	....	1	...	...	...	...	...
South Carolina	5	4	1	....	....	....	....	....	....	...	...	...	...	...
South Dakota	1	1	....	....	....	....	....	....	....	...	...	...	...	...
Tennessee	11	9	....	2	....	....	....	....	....	...	...	...	...	...
Texas	20	19	1	....	....	....	....	....	....	...	...	...	...	...
Utah	4	4	....	....	....	....	....	....	....	...	...	...	...	...
Vermont	2	2	....	....	....	....	....	....	....	...	...	...	...	...
Virginia	17	14	....	1	....	....	....	1	....	...	...	1	...	...
Washington	5	4	1	....	....	....	....	....	....	...	...	...	...	...
West Virginia	5	5	....	....	....	....	....	....	....	...	...	...	...	...
Wisconsin	14	13	....	....	1	....	....	....	....	...	...	...	...	...
Wyoming	1	1	....	....	....	....	....	....	....	...	...	...	...	...
Totals	801	636	53	34	24	1	18	12	6	3	5	6	2	1

EQUIPMENT OF THE HOSPITAL

The questions in regard to equipment applied mainly to the pathologic and clinical laboratory and its equipment to make certain examinations and analyses, the roentgen-ray laboratory and the work it is equipped to perform, and the employment by the hospital of expert anesthetists and dietitians. The number of hospitals replying in the affirmative to each question is indicated in the table, and the data are so arranged that for each state the totals may be seen, as well as the totals for the entire country. The bottom line gives the percentages of hospitals which are equipped in the various lines indicated. It will be seen that nearly all hospitals have laboratories equipped for the simpler chemical examinations of blood, urine and bacteriologic examinations, while to a less extent they are equipped to make gastric analyses, tissue examinations, total nitrogen determinations and serologic examina-

and as a part of the routine in the commissioning of medical officers, lists of applicants were sent to the Association for verification of their graduation and license. In 1917, through the possession of the Students' Register, unanswerable arguments were advanced favoring the exemption of medical students from the draft and, as a result, the Medical Enlisted Reserve Corps was established.

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The world war has emphasized the great need of better facilities for graduate medical instruction in the United States. Such facilities were in great demand by medical officers as they were being released from active duty since that presented an excellent opportunity for them to take up certain courses of graduate study before returning to active practice. Improved facilities for graduate work are also important to meet the demands of our neighbors in the Spanish countries of Central and South America. The development of graduate work is an important subject to consider in connection with the efforts to standardize hospitals.

IX. Medical Cults

An important matter, which affects the relationship between the public and the practice of medicine and which is a problem directly concerned with medical education and medical licensure, is the existence and practice of the various pseudomedical cults, represented by osteopaths, chiropractors, naprapaths, spondylotherapists, neuropaths, psycultopaths, etc. Most of the teaching institutions turning out such practitioners have been inspected by the Secretary of the Council while on his various tours of inspecting medical schools. Files of information in regard to these institutions have been kept, which include catalogs, printed literature, circular letters, inspection reports, etc. The problem has been given sufficient study so that the following reliable statements can be made:

(*a*) The only logical argument to be made against practitioners of these cults is their lack of education. Such training as they have received has been in institutions requiring little or no educational qualifications for admission, and under faculties made up almost entirely of those who have not had a complete medical training. Graduate nurses could, with far greater justice, ask the right to treat human disorders than could the followers of these cults, because nurses are largely taught by physicians and secure their training in hospitals where all types of disease are treated by physicians.

(*b*) Before the recent improvements were made in medical education, many of the medical schools were very little better, from the standpoint of buildings, equipment and teaching facilities, than the better pseudomedical cult institutions. In the former, however, all instructors were those who had received a training in all the branches of medicine. Under the greatly improved conditions brought about in the last fifteen years, there is now so marked a distinction between the education and training of physicians as compared with those of the cult practitioners, that any intelligent layman can note the difference.

(*c*) The medical profession is justified in objecting to the various cults, not because of their peculiar systems of practicing, but because of their serious lack of education and the fact that they are seeking the right to practice as physicians without meeting the same educational standards with which physicians have to comply. If such practitioners wish to appear before the public as physicians and surgeons and to assume all responsibilities of such, then they should not object to being measured by the same standards and submitting to the same tests.

(*d*) The work of the Council in connection with low-grade medical colleges, drugless cult institutions and diploma mills has called attention to the lack of adequate safeguards over the chartering of educational institutions in the various states. In all but a few states any group of individuals for a small fee can secure a charter to open an educational institution and to grant all the degrees in the category, no questions being asked in regard to ability, financially or educationally, to furnish the education usually required for such degrees. Attention to the need of such safeguards was called by the Secretary in his report to the Council in 1916. Reprints of this report were sent to the educational authorities in each state, and a growing interest is being manifested toward the securing of the laws needed to establish such safeguards.

X. Hospital Standardization

(*a*) The "Ideal Standard," established by the Council in 1904, included among its requirements a fifth year to be spent by the student as an intern in a hospital. The Council, therefore, has always had a special interest in the number and character of hospitals. Since 1905 brief reports have been obtained each year from all hospitals as a basis for the lists published in the successive editions of the American Medical Directory. The information included merely the name, character and location of the hospital, the number of beds and the name of the superintendent. Copies of the hospitals' annual reports were asked for and were received from many of the larger hospitals. Much information was obtained from other sources regarding the reputation of the various institutions. Information in the Biographical Index gave other important data regarding the qualifications of the physicians on the hospital staffs. During the various tours of inspection, hospitals connected with medical schools were inspected by the Secretary of the Council, and first-hand information obtained regarding the number of interns and the character of their training.

(*b*) During 1912-1913 a carefully worded questionnaire was sent to 2,424 hospitals having twenty-five or more beds. Reports were received from 2,185, and of this number 852 were regularly using interns, providing places for 3,006 interns.[1] The report showed that the hospitals did not provide sufficient places for the 3,981 students who graduated in that year. Based on the information from this questionnaire and from the inspections made, the Council published in 1914 its first provisional list of hospitals considered in position to furnish acceptable internships. With the revisions made by state advisory committees, only 532 hospitals were recommended in this first list, and internships in them were available for 2,148 graduates each year.

(*c*) A second survey was [illegible] nued during 1915. New a[illegible] two years of the student's time. [illegible] various state medi[illegible]n in the United States more into c[illegible] committees—th[illegible]stems of education in other leading countri[illegible] tematically [illegible]TION AND CLASSIFICATION OF MEDICAL SCHO[illegible] limited extent inspection[illegible] the advisory committees and teaching hospitals were inspected by the Secretary. The list of hospitals based on this second survey, which was published in August, 1916, was much more reliable than the first, and contained the names of 687 hospitals which provided intern[illegible] immediately begun [illegible] 3,340 graduates each year—more than could [illegible] a result [illegible]visory committees appointed by th[illegible] of the constant [illegible]cal associations were secured. Two of the been adopted [illegible] inspected all the hospitals in those states. cal schools and as [illegible] New Jersey and Pennsylvania—sys[illegible] licensing boards. [illegible] were made in other states. To a[illegible]

(*d*) The third survey of hospitals [illegible] 1918. The state advisory committees were strength[illegible] by [illegible] their membership renewed, through correspondence with state medical associations. The third questionnaire was sent to 1,126 hospitals, and an abundance of up-to-date information has been secured from this and other sources. Annual reports from the majority of the institutions have been obtained, and reports from hospitals are pouring in, giving the names of the physicians who are members of the attending and consulting staffs.

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[1] See "Preliminary Report on the Standardization of Hospitals," American Medical Association Bulletin, March 15, 1915, p. 316.

ample room not only for the work of the American Medical Association, but also for that being done by the American College of Surgeons, the Catholic Hospital Association, and for what may be planned by the American Hospital Association and other organizations. Efforts are now being made to secure the cooperation of all agencies so as to bring about the greatly needed improvement in the hospitals of the United States.

At the conference on medical education last March, a paper on hospital standardization was presented by Dr. A. R. Warner, president of the American Hospital Association. At the close of the discussion a resolution was adopted urging the creation of a conference which would include representatives of all factors interested in development and standardization of hospitals, and urging that a meeting be called at an early date under the auspices of the American Medical Association. In accordance with this resolution, a special meeting was called by President Bevan, which was held in Chicago on Monday, April 21. Representatives were present from the American Medical Association, American Hospital Association, the American College of Surgeons, the Association of American Medical Colleges, the Catholic Hospital Association, the American Nurses' Association, the American Association of Hospital Social Workers, and the Federation of State Medical Boards of the United States.

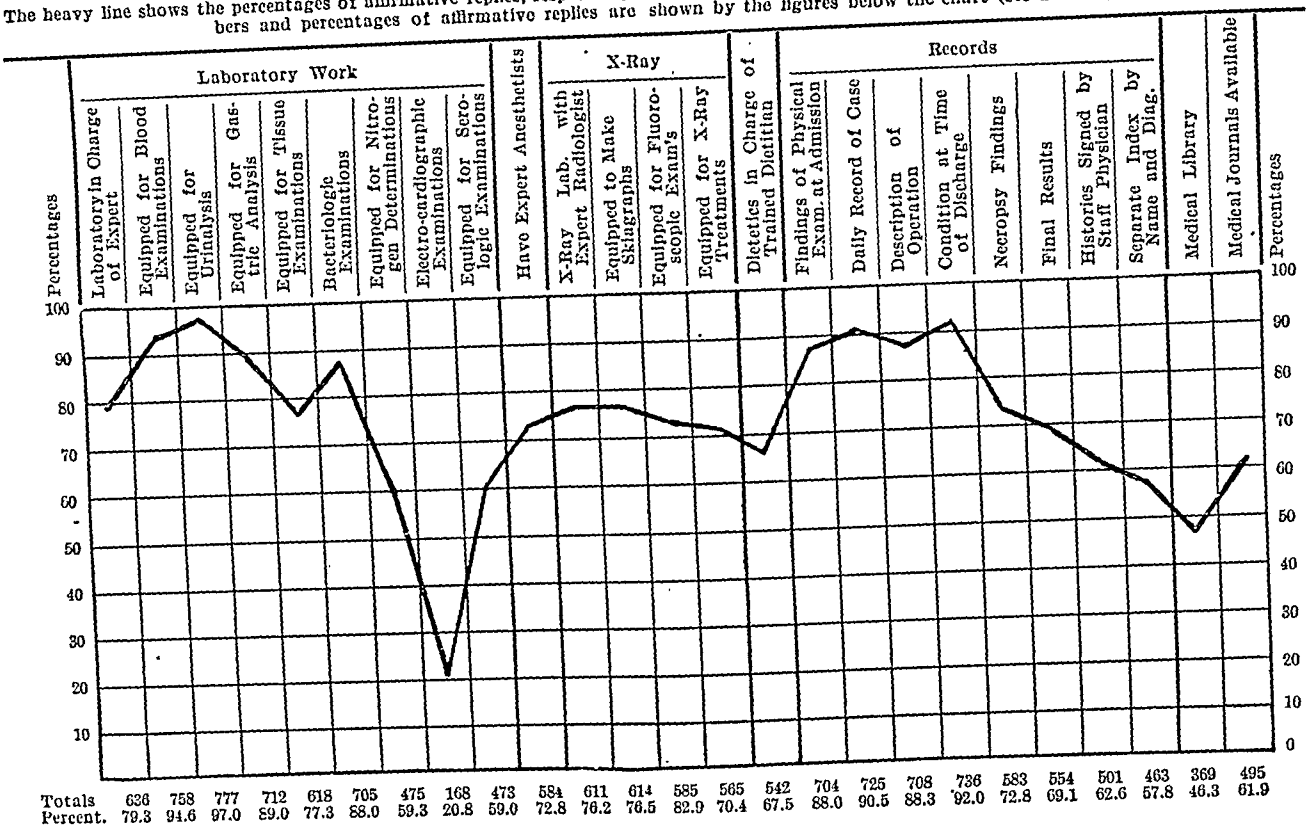
Following a series of reports from the several organizations, it was voted that an American Hospital Conference be organized, to be made up of two representatives of each of the organizations named, and two each also from the American Association of Industrial Physicians and Surgeons and the medical departments of the United States Army, Navy and Public Health Services—altogether twelve organizations and twenty-four delegates. An executive council of three members was created to have in charge the direction of the work connected with the drafting of a constitution and other essentials which will be presented at the first meeting of the conference to be held in connection with the annual meeting of the American Hospital Association in September. A second meeting will be held in connection with the annual conference of the Council on Medical Education at Chicago in March, 1920. The members appointed on the executive council were Dr. A. R. Warner, president of the American Hospital Association, Cleveland, chairman; Dr. John M. Dodson, dean of the Rush Medical College, Chicago, and Dr. Walter L. Bierring, secretary of the Federation of State Medical Boards, Des Moines, Iowa. Through this hospital conference all the various factors interested in the development and standardization of hospitals will have a voice in the formulation of standards for use in the investigation and measurement of such institutions.

ESSENTIALS FOR AN INTERN TRAINING

Based on the abundance of data obtained from the various hospitals from an extensive correspondence with hospital superintendents, deans of medical schools, representatives of state licensing boards and others, the Council has prepared the following tentative outline suggesting the equipment and facilities needed by a hospital and the regulations to be put into effect in order that it may provide a satisfactory training for its interns:

CHART 2.—EQUIPMENT AND RECORDS OF 801 HOSPITALS USING INTERNS

The heavy line shows the percentages of affirmative replies, respectively, to the several questions indicated by the headings. Both the total numbers and percentages of affirmative replies are shown by the figures below the chart (see Table 3).



TENTATIVE SCHEDULE OF ESSENTIALS IN A HOSPITAL FOR THE SATISFACTORY TRAINING OF INTERNS

I. The Staff of the Hospital

1. There must be an organized staff.
2. Staff physicians should be men of unquestionable integrity both professionally and morally.
3. They should be proficient in the special fields in which they work in the hospital.
4. They should give personal attention to the patient under their charge, some member of each department visiting the hospital every day, and every member of the staff should visit the hospital at least once each week.
5. They should assume an obligation to direct and supervise the training of the interns admitted to the staff.
6. (a) A clinical conference of the attending staff and the interns should be organized and held at frequent intervals at least monthly, at which new cases and the problems they

present should be discussed. (*b*) There should also be clinical and pathologic conferences, for the attending staff and interns where the antemortem clinical picture is presented and compared with the necropsy findings. (*c*) There are also hospital medical societies at which staff members and interns are encouraged to present cases which have been worked up from the clinical point of view and on which they have read up the available literature.

II. The Equipment of the Hospital

1. A pathologic department equipped with facilities for necropsies, this work to be in charge of an expert, who may be a member of the staff skilled in such work.

2. One or more small clinical laboratories for work by the intern in direct connection with the wards for the routine examination of blood, urine, stools and gastric contents. Within the hospital there should be also a clinical laboratory in charge of an expert who shall be responsible for the more technical, chemical, bacteriologic and serologic work and examinations.

3. A roentgen-ray department in charge of an expert roentgenologist and equipped to do roentgenographic, fluoroscopic and therapeutic work.

4. A working medical library containing a fair supply of modern standard text and reference books, the better medical journals, and suitable charts and models. Bound volumes of the better medical journals for recent years constitute a very satisfactory part of a hospital medical library.

5. Adequate provision for the housing and recreation of interns.

III. Histories and Records

1. Complete histories should be taken, giving the patient's complaint, physical examination at time of admission to hospital, laboratory findings, description of operation, if any, daily record of case, condition and date when discharged from the hospital, end-results, and, in case of death, necropsy findings if necropsy is performed.

2. The histories should show, by signatures or initials, the persons writing them or parts of them. This will show not only the work of the intern, but also the supervision over it by members of the attending staff. In hospitals where senior medical students act as clinical clerks, it should be the duty of the interns to supervise and correct the histories written by the students and the records they keep.

3. The records should be carefully kept and placed in charge of a trained historian. This will not only guarantee better records and better care from the patient's point of view, but also will actually protect the hospital itself, especially in certain medical legal cases.

4. The records should include an alphabetical index of the patients, another arranged by diagnoses, and, for surgical cases, one arranged from the standpoint of the regional part involved. For the alphabetical index cards might be used which would show the end-results, sometimes referred to as the "summary" of the case.

IV. The Work of the Intern

1. The hospital should have a set of printed rules and regulations defining the rights, duties and privileges of the interns which should be furnished to each intern or posted in a conspicuous place.

2. All of the work of the interns should be under the careful supervision of staff physicians. This is essential, not only to correct errors—such as may be expected from his lack of experience—and thereby protect the patient, but also that the intern may receive instruction through his errors and be able to avoid their repetition.

3. The writing of histories in connection with the examination of patients. (See III, 2, above.)

4. Clinical laboratory work. This work might well be divided into two portions, the first to be obtained in the ward laboratory work in connection with the examination and care of patients, the other portion to be obtained in the general laboratory in assisting the expert pathologist in the more technical, chemical, bacteriologic and serologic work. (See II, 2.)

5. Roentgen-ray work: The intern should receive a reasonable amount of instruction in the therapeutics of the roentgen ray and also in the interpretation of roentgen-ray plates and fluoroscopic findings by an expert roentgenologist or a qualified member of the hospital staff.

6. Anesthetics: The intern should obtain experience in the administering of various kinds of anesthetics under expert supervision.

7. Dietetics: The intern should be given instruction by a trained dietitian, or qualified staff member, in the feeding of both infants and adults as required in various diseases or conditions.

8. Maternity work: Before finishing his intern service, the intern should have had experience under supervision not only in the delivery of normal maternity patients but also in the more common abnormal cases.

9. Necropsies: The intern should obtain an experience in making necropsies either under the direction of or by assisting the hospital pathologist.

10. In his progress through his junior and senior service, the intern should assume, under careful supervision, an increasing responsibility in the diagnosis, daily observation, care and treatment of the patients under his service. This experience and responsibility should be in connection with as large a variety of cases as possible and include at least such diseases as are commonly met with by the average practitioner of medicine.

11. The intern should obtain a practical experience in the applying of surgical dressings in connection with the care and treatment of patients. As he progresses in his surgical intern service he should be authorized under careful supervision to perform not only minor surgical operations but also some of the more common major operations. In major operations, the attending surgeon should stand by, or assist the intern. Experience in connection with accident service is, likewise, highly desirable.

12. The number of patients assigned to each intern and the routine work required of him should not demand more than eight (at most, ten) hours daily. He must have ample time to study and read up on his cases both in the interest of his patients and for his own educational progress.

13. The intern service should extend through at least twelve months, and may to great advantage be continued through eighteen months or two years.

V. Miscellaneous

1. Prominent educators are about equally divided in favoring the rotating and nonrotating services for interns. It is evident, however, that each may represent an extreme which should be avoided. If the intern's work is limited to either medical or surgical services, the intern should be encouraged to remain an additional year so as to complete both services. Special hospitals, such as those for diseases of the eye, ear, nose and throat, should preferably select their interns from those who have already completed a service in a general hospital.

2. Where the internship is being taken as a prerequisite to graduation, the evaluation and grading of his hospital work should be done by the medical school from which he is to secure his M.D. degree, either by direct conference with his resident superior, or indirectly, through a series of reports furnished for this purpose by the hospital.

3. The hospital should have an average of not less than twenty-five patients to be eligible to train an intern. To provide for a rotating service in laboratory, medicine and surgery, therefore, a hospital should have at least seventy-five beds and three interns.

4. In hospitals having four or more interns, they should preferably begin their work at different times and pass through junior and senior service. The services are sometimes further subdivided into first and second junior and first and second senior services. Such an arrangement keeps in the hospital a constant supply of experienced interns. This is not only the interest of the patient, but also enables senior interns to instruct juniors.

5. In hospitals having 100 beds or more, in addition to the interns, there should be a full-time resident physician, who has had at least one year's intern experience. It shall be his duty to supervise the work of the interns, particularly at times when no staff physicians are in attendance at the hospital. Even hospitals having less than 100 beds (public ward patients) will furnish their interns with a more valuable training if a resident physician is employed to superintend the professional work in the hospital.

VI. Object

It is believed that an internship obtained under the provisions herein made will prove to be for the best interests not only of the intern and of the hospital, but also of the patients and of the public at large.

Present Enrolment in Medical Schools

Reports from the eighty-five medical colleges which conducted classes during the session of 1918-1919, show that the total enrolment of medical students is approximately 12,090, or 1,540 less than for the session of 1917-1918. The reduction is mainly in the freshman classes of which the total enrolment is approximately 2,810 for the present session, as compared with 4,283 for the previous session. There were twenty-five medical schools also which last fall for the first time enforced the requirement of two years of collegiate work for admission. Such schools were expected to report smaller enrolments in the freshman classes. The decrease, however, was not due altogether to higher entrance requirements. Usually in colleges which had become readjusted under the higher entrance requirements the enrolments have shown an increase or have returned to their previous numbers. This year, however, of the sixty colleges reporting which put into effect the higher requirements in 1916 or previous years, thirty, or 50 per cent., reported a decrease in the number of freshman students. This unusual decrease was due clearly to the volunteering or drafting of premedical students for military service during 1917-1918. With the beginning of another session following the return of soldiers and sailors to civilian life, the enrolments of students in our medical colleges will return to their prewar proportions. Since all colleges have now passed the crisis of the higher entrance requirements, it is quite likely also that the total enrolments in medical schools will show an increase over this and previous years.

Result of the War on Medical Education

In order to bring medical education in the United States on a par with that of other countries, the general requirement of two years of collegiate work for admission was essential. With this increase and with the diminution of the number of medical schools, a decrease in the total enrolment of medical students was to be expected. That this country has about reached the lowest point in such enrolments, however, may be seen from Table 4. Following the readjustment under the higher entrance standards naturally the increase in the enrolments would be noted first in the freshman, then the sophomore, junior and senior classes, respectively, in four successive years, and the table bears this out in that the lowest ebb in the four classes appears for the first year students in 1915, for the second year students in 1916, for the third year students in 1917, and for the fourth year students in 1918. Had normal conditions continued all classes would now be showing an increase and there would have been a resulting increase in the total enrolment for all classes. That this has not been the case is due to the unusual conditions resulting from the world war and the part our country has had in it.

No Scarcity of Physicians

The unusual demand for medical officers naturally created a temporary scarcity of physicians for hospitals and civilian needs, but this was to be expected, and was merely a parallel to the scarcity of experts in other lines of human activities—a scarcity which will undoubtedly disappear following the return of medical officers to a civilian status. The world war has called attention to special needs in every line of human endeavor. No previous war had so involved the entire world or so hazarded the very existence of practically every civilized government. In no previous war was such extensive use made of those who had reached the highest attainments of human skill and ingenuity. The urgency and extent of this demand naturally drew attention to the scarcity of those who were qualified to render service along highly technical or specialized lines. So in medicine there was an unprecedented demand for physicians of exceptional qualifications and skill in the various specialties, such as pathologists, bacteriologists, psychiatrists, brain surgeons, oculists, etc. Here, likewise, the urgency of the demand has forcibly revealed the fact that the supply of physicians having such skill is comparatively limited.

This revelation, however, is not a criticism of medical education of the past, but lays emphasis on the possibilities and aims of medical education in the future. The improvements of the last fifteen years were directly in line with these needs. This country was never so well supplied with physicians who were so thoroughly trained or as skilled in the specialties as at the time it entered the world war.

The war has rendered a great service in revealing the possibilities and benefits that will result from higher attainments in medicine. This shows the necessity of continuing the campaign for improvements not only in undergraduate but also in graduate medical education. If the highest attainments are of such vital importance in great national crises, how much greater will be the service to the public whether there be peace or war.

TABLE 4.—ENROLMENTS OF MEDICAL STUDENTS FOR SEVEN YEARS, SHOWING VARIATION IN NUMBERS BY CLASSES

Year	Freshmen	Sophomores	Juniors	Seniors	Totals
1913	4,564	4.093	3,639	4,444	17,015
1914	4,684	3,981	3,807	3,955	16,507
1915	3,373	3,919	3,675	3,864	14,891
1916	3,582	3,094	3,559	3,727	14,022
1917	4,107	3,117	2,866	3,674	13,764
1918	4,283	3,521	2,893	2,933	13,630
1919*	2,810	3,448	3,158	2,674	12,090

* Estimate.

The line drawn through the table underscores the figures for the freshman, sophomore and junior years which represent the lowest ebb in the enrolment in the respective classes. The number of seniors in 1918 would likewise have been the lowest enrolment for that class had it not been for the exceptional circumstances due to the war. While the figures for 1919 are estimated they are very nearly accurate since reports from all but a few colleges were obtained.

Proportion of Physicians to Population

The supply of physicians in this country is still greater in proportion to the population than that of any other civilized country. According to the sixth edition of the American Medical Directory, completed in 1918, the United States had 147,812 physicians. The total population of the United States, as given in an estimate of the Census Bureau in 1918, was 105,253,300—which is one physician for every 712 people. Various reports regarding the proportion of physicians to population in the countries of Europe just prior to the war show that in those countries the proportion ranged from one to 1,500 to one to 2,500. This country, therefore, still has twice as many physicians to population as the most favored country of Europe

There is, however, an increasing demand for physicians for various lines of work—a demand which can be met only by continuing the high standards of preliminary and medical education now generally adopted, and by further improving our facilities for both undergraduate and graduate medical teaching. This demand for physicians is increasing for the following reasons:

(*a*) The work in public health and preventive medicine is being rapidly expanded especially along the lines of quarantine work, sanitary inspection, medical inspection of schools, etc.

(*b*) There is an increasing demand for physicians who specialize in laboratory diagnostic work. Such positions now carry larger salaries and are attracting an increasing number of medical graduates.

(*c*) There is an increasing demand also for full-time teachers in medical schools for both laboratory and clinical subjects. These places are not only paying better salaries than formerly, but are attractive to many on account of the opportunity for scientific experimentation and research.

(*d*) The rapid development of insurance has brought an increased demand for physicians who devote themselves entirely to such work. With the extension of industrial insurance this demand is bound to be still further increased.

(*e*) The increased study and research being given to tuberculosis, to mental diseases, to cancer and other like problems, is attracting many who would otherwise continue in the practice of medicine.

(*f*) The tremendous interest being aroused for the development of hospitals in smaller cities and rural communities will create a demand for recent graduates as resident physicians in such hospitals. Through the inability to secure interns, hospitals will be inclined to employ resident physicians for a series of years on progressively increased salaries.

(*g*) In the reorganization and improvement of hospitals there is a growing demand for those to serve as superintendents who can combine their medical training with administrative ability.

Rural Communities

The chief complaint in regard to a scarcity of physicians comes naturally from the sparsely settled rural communities where physicians could not make a livelihood because of the difficulties of intercommunication and transportation. With the advent of the telephone, the automobile, improved roads and interurban transportation, however, conditions in rural communities have gradually improved. The physician can now more easily reach the patient in the rural district in emergency cases. Now in a large number of cases the patients go to the physicians in the smaller cities nearby. The number of hospitals in or near these rural districts is rapidly increasing, and this will enable each physician to care

TABLE 5.—CHARACTER OF PHYSICIANS LICENSED IN 1918

Marginal Number	STATES	By Examination: Medical Colleges in Class A	B	C	Misc.	Totals	On Reciprocity or Credentials: Medical Colleges in Class A	B	C	Misc.	Totals	Totals Registered from Medical Colleges in Class A	B	C	Misc.	Grand Totals	Marginal Number
1	Alabama	16	4	0	0	20	2	1	0	3	6	18	5	0	3	26	1
2	Alaska	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
3	Arizona	11	4	1	17	33	0	0	0	0	0	11	4	1	17	33	3
4	Arkansas	7	28	26[1]	7	68	5	4	0	4	13	12	32	26[1]	11	81	4
5	California	37	58	105[2]	3	203	30	11	11	87	139	67	69	116[2]	90	342	5
6	Colorado	16	3	24[3]	1	44	14	4	0	35	53	30	7	24[3]	36	97	6
7	Connecticut	35	3	0	1	39	2	1	1	3	7	37	4	1	4	46	7
8	Delaware	6	4	0	0	10	7	0	2	5	14	13	4	2	5	24	8
9	District of Columbia	33	1	0	3	37	4	0	0	0	4	37	1	0	3	41	9
10	Florida	3	2	0	16	21	0	0	0	0	0	3	2	0	16	21	10
11	Georgia	38	8	1	1	48	8	3	0	13	24	46	11	1	14	72	11
12	Idaho	5	0	2	9	16	6	1	0	8	15	11	1	2	17	31	12
13	Illinois	188	159	9	11	367	11	2	2	10	25	199	161	11	21	392	13
14	Indiana	37	4	0	2	43	8	3	0	4	15	45	7	0	6	58	14
15	Iowa	40	7	1	2	50	8	6	4	11	29	48	13	5	13	79	15
16	Kansas	18	1	0	1	20	11	8	4	13	36	29	9	4	13	56	16
17	Kentucky	20	17	2	1	40	6	1	3	4	14	26	18	5	5	54	17
18	Louisiana	43	2	0	5	50	2	2	0	3	7	45	4	0	8	57	18
19	Maine	21	1	0	5	27	3	0	0	2	5	24	1	0	7	32	19
20	Maryland	50	2	1	1	54	7	1	1	10	19	57	3	2	11	73	20
21	Massachusetts	188	8	10	22	227	0	0	0	0	0	188	8	9	22	227	21
22	Michigan	96	0	1	0	97	22	3	0	23	48	118	3	1	23	145	22
23	Minnesota	67	1	0	0	68	18	4	0	7	29	82	5	0	7	94	23
24	Mississippi	12	0	0	0	12	0	0	0	3	3	12	0	0	3	15	24
25	Missouri	76	9	50	8	143	9	17	2	15	43	85	26	52	23	186	25
26	Montana	7	4	0	9	20	0	0	0	0	0	7	4	0	9	20	26
27	Nebraska	42	2	0	0	44	13	5	0	15	33	55	7	0	15	77	27
28	Nevada	1	3	0	1	5	2	0	0	9	11	3	3	0	10	16	28
29	New Hampshire	3	0	1	0	4	0	0	0	3	3	3	0	1	3	7	29
30	New Jersey	12	0	0	4	16	41	6	1	37	85	53	6	1	41	101	30
31	New Mexico	0	1	0	1	2	10	3	0	18	31	10	4	0	19	33	31
32	New York	402	39	7	8	456	15	5	0	20	40	417	44	7	28	496	32
33	North Carolina	42	2	1	4	49	4	4	0	10	18	46	6	1	14	67	33
34	North Dakota	2	1	0	3	6	1	0	0	4	5	3	1	0	7	11	34
35	Ohio	106	30	1	5	142	14	3	0	16	33	120	33	1	21	175	35
36	Oklahoma	3	16	2	3	24	7	10	3	29	49	10	26	5	32	73	36
37	Oregon	18	4	0	13	35	0	0	0	0	0	18	4	0	13	35	37
38	Pennsylvania	154	7	0	7	168	3	0	0	1	4	157	7	0	8	172	38
39	Rhode Island	10	1	1	1	13	0	0	0	0	0	10	1	1	1	13	39
40	South Carolina	16	0	0	1	17	0	0	0	0	0	16	0	0	1	17	40
41	South Dakota	9	2	1	2	14	0	0	0	0	0	9	2	1	2	14	41
42	Tennessee	30	58	14	1	103	10	0	0	1	11	40	58	14	2	114	42
43	Texas	60	14	3	5	82	11	16	18[4]	22	67	71	30	21[4]	27	149	43
44	Utah	9	1	0	0	10	5	1	1	6	13	14	2	1	6	23	44
45	Vermont	24	0	0	0	24	0	0	0	1	1	24	0	0	1	25	45
46	Virginia	41	3	3	3	50	13	4	0	11	28	54	7	3	14	78	46
47	Washington	26	9	10	14	59	0	0	0	0	0	26	9	10	14	59	47
48	West Virginia	6	9	0	1	16	9	4	0	12	25	15	13	0	13	41	48
49	Wisconsin	22	7	0	5	34	5	2	0	13	20	27	9	0	18	54	49
50	Wyoming	1	5	11	5	22	1	3	1	1	6	2	8	12	6	28	50
	Totals	2109	544	288	213	3154	347	138	54	492	1031	2456	682	342	705	4185	

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[1] Of the 81 physicians licensed in Arkansas, the Regular Board licensed by examination 7 Class A, 28 Class B and 7 miscellaneous graduates and by reciprocity 5 Class A, 4 Class B and 4 miscellaneous graduates, a total of 13. The Eclectic Board licensed by examination 26 Class C graduates. The Homeopathic Board reported no candidates licensed either by examination or by reciprocity.

[2] Of the 105 graduates of Class C colleges licensed in California, 77 were graduates of osteopathic colleges which are not generally recognized as medical colleges by state licensing boards, and 34 of these were required to take only an oral examination. Altogether 133 osteopaths were admitted to the examination for licensure as physicians and surgeons and 77 were so licensed.

[3] Of the 24 graduates of Class C colleges licensed in Colorado, 21 were graduates of osteopathic colleges, institutions inferior in most respects to Class C medical schools which are reported as not recognized in Colorado.

[4] Texas licensed 3 Class C graduates by examination (although Class C colleges are reported as not recognized) and 18 Class C graduates (including 11 osteopaths) were licensed by reciprocity, a total of 21.

This table shows the classification of the colleges from which most of the phys[illegible] licensed in 1918. Graduates of colleges [illegible] to 1907 who were examined, and all reciprocit[illegible] prior to 1907, are unclassified and included [illegible] It was in 1907 that the Council on Medical Education completed its first classification of all medical colleges.

It will be seen that five states accepted Class C graduates through reciprocity where they did not license any by examination. On the whole, however, 287 were licensed by examination where only 54 were registered through reciprocity.

By both examination and reciprocity, the largest numbers of Class C graduates were licensed in California, 116 (including 77 osteopaths); Colorado, 24 (including 21 osteopaths); Missouri, 52; Arkansas, 26 (all by the Eclectic Board); and Texas, 21. The largest numbers of Class B graduates were licensed in Illinois, 161; California, 69; Tennessee, 58; New York, 44; Ohio, 33, and Arkansas, 32.

Of all physicians licensed, 2,456, or 58.7 per cent., were graduates of Class A medical schools; 682, or 16.3 per cent., from Class B schools; 342, or 8.2 per cent., from Class C schools, and 705, or 19.2 per cent., from miscellaneous colleges.

for a larger number of patients and thereby make a better livelihood. The rural districts, therefore, will secure better trained physicians. Not only will there be a larger number of physicians, but there will be more skilled service.

Postgraduate Education

One of the benefits of the world war is that attenton has been called to the great importance of a better training of physicians, particularly along the line of the narrower specialties. A tremendous interest in postgraduate medical education has developed, therefore, not only in the United States, but also in European and other countries. In all our large cities there is an abundance of clinical teaching material which would be most useful for graduate medical instruction, but which is widely scattered, and not readily accessible to the student. It must first be cataloged and administered by a single organization so that information regarding the work can be obtained by the student by applying at a single place rather than at several widely separated places, which is the condition which prevails at present. A report has just been received indicating that in New York City a movement is on foot to pool all of the hospital facilities for the development of a great scheme for postgraduate medical education, and doubtless similar movements will soon be evident in other large cities. The closer friendship and harmony between the United States and the sister republics of Central and South America—another result of the war—will be further extended if through the development of postgraduate medical education students from South American countries will be induced to and can readily obtain instruction in such subjects as they may desire. In this connection, the exchange of professors between this and European countries and the proposed exchange of clinical clerks and clinical assistants are steps in the right direction. The arrangement should be extended also to the countries of Central and South America.

Progress in Medical Licensure

Since 1904 the Council has had as one of its regular functions the collection and tabulation of statistics which are published in the State Board Number of The Journal in April of each year. These tables have had a large influence in the improvement of both medical education and medical licensure. One table published with the statistics the last two years is reproduced herewith in Table 5. It shows the classification of the colleges from which each physician graduated who was licensed either by examination or reciprocity during 1918. Graduates of medical school which ceased to exist or which merged with other schools prior to 1907 are included among "miscellaneous" candidates, since no medical schools were classified prior to 1907 following the tour of inspection made by the Council on Medical Education. This table will show the members of the House of Delegates just how many physicians licensed in their respective states during 1918 were graduates of Classes A, B and C medical schools and whether the people of those states are being adequately protected against the output of low-grade colleges. Special attention is called to the footnotes, which give information relating to certain states.

Work for the Coming Year

As intimated in the foregoing report, the lines of work to be emphasized by the Council on Medical Education during the coming year are:

(*a*) Continuation of the work in connection with medical education and licensure by securing information from medical colleges and state boards and publishing it as usual in the Educational and State Board Numbers of The Journal. This includes also the routine work in connection with the Medical Students' Register and the Biographical Index of Physicians.

(*b*) The continued agitation in regard to improvements in preliminary and medical education and in medical licensure through the annual conference.

(*c*) Continued efforts with agencies having to do with the standardization of colleges of liberal arts and sciences in the effort to secure a complete list of approved colleges of arts and sciences and junior colleges which are in position to give satisfactorily two years of premedical college work.

(*d*) A complete reinspection of all medical colleges, which is essential preparatory to a revision of our classification. This is needed so as to aid a number of colleges which have made numerous improvements; it is neecessary also so as to ascertain whether all medical schools are keeping up to the required standards of excellence.

(*e*) An inspection of all hospitals undertaking to train interns. This can be done in connection with the inspection of medical schools and will in no way conflict with the investigation of hospitals in general being made by the American College of Surgeons and other agencies. It will, in fact, be in harmony with that work.

(*f*) A furtherance of the efforts toward securing the cooperation of all agencies interested in the improvement and standardization of hospitals, toward the main object sought—that the physicians on their staffs may be able to render the best service to the patients in the communities which the hospitals serve.

(*g*) A continued study of the facilities for postgraduate medical education in the United States and publicity regarding the needs of further development along that line. This will include efforts to secure closer relations between the United States and other nations, including those of Central and South America, in both undergraduate and postgraduate medical education.

(*h*) Continued efforts to secure safeguards in each state over the chartering of educational institutions.

In Conclusion

This report shows the lines along which the work of the Council on Medical Education has been developed during the last fifteen years and the direct connection of that work with what still remains to be accomplished. The experiences of the war have emphasized other needs in medical education particularly in the clinical part of the medical course and in the better training for specialists. Improved relations with other countries in medical education; the investigation and standardization of hospitals (with a cordial cooperation of all agencies interested) and the further development of postgraduate medical education—all deserve to have careful consideration and energetic action.

Respectfully submitted,

The Council on Medical Education,
John M. Dodson, Acting Chairman,
Robert C. Coffey, William D. Haggard,
William Pepper, Isadore Dyer,
N. P. Colwell, Secretary.

Report of the Council on Scientific Assembly

Dr. E. S. Judd, Minnesota, Chairman, presented the report of the Council on Scientific Assembly, which was referred to the Reference Committee on Sections and Section Work.

The report follows:

To the Members of the House of Delegates of the American Medical Association:

At the Chicago session, last year, the Reference Committee on Sections and Section Work submitted the following in its report to the House of Delegates:

> "We find on referring to the program of the Scientific Assembly and to the meeting of the House of Delegates that there are nineteen separate and distinct sections of our association meeting during five days, as follows: House of Delegates, general meetings, scientific exhibits, and sixteen scientific sections. We therefore appreciate the significance of this statement that much time is devoted to scientific work, leaving very little for pleasure and getting acquainted.
>
> "We also find that a resolution has been handed to us requesting consideration of the creation of a new section on industrial physicians and surgeons, making additional scientific work. There would then be twenty distinct parts of the association meeting during the five days. We find also, on referring to the program, that there are 562 speakers listed to address the physicians in attendance. This does not include meetings of the House of Delegates or meetings on Wednesday and Thursday evenings.

"As a result of all this, we find it impossible to make any definite recommendation to become operative at the next session, and as this involves every member of the Association in attendance, we would recommend that this House of Delegates direct the Council on Scientific Assembly to carefully study this problem and form a definite plan of procedure for future meetings. We would also recommend that the committee be directed to forward the suggested plan of procedure to each member of the House of Delegates, for the next session, at least two weeks prior to the first day of the meeting of the House, and that the report of the Council be submitted to the House of Delegates at the next session for definite action."

The House of Delegates adopted the report of this Reference Committee and the Council on Scientific Assembly, in compliance with this direction of the House of Delegates, arranged for, and held a conference of Secretaries of Sections at the headquarters of the Association, in Chicago, February 6. At this conference, the acting Secretaries of all the Sections were in attendance with the exception of the Secretary of the Section on Dermatology. In addition, the Chairman of the Section on Ophthalmology, the President and the President-Elect of the Association, the Speaker of the House of Delegates and the Secretary of the Board of Trustees, were present, as were all the members of the Council on Scientific Assembly, with the exception of Dr. Roger S. Morris, who was absent from the country on military duty.

There was an earnest discussion of the subjects presented in the foregoing recommendations of the House of Delegates and other matters pertaining to the Scientific Assembly, as well as the plans for the Victory Meeting, the annual session of 1919.

By mutual consent of the Secretaries of all the Sections, it was agreed to make trial at this annual session of dividing the sections into two groups; one group to meet in the morning hours and the other group to meet in the afternoon hours on Wednesday and Friday. It was further mutually agreed that all the Sections shall meet on Thursday morning, in order to place that afternoon at the disposal of the Board of Trustees for large general meetings, to be addressed by foreign physicians in attendance at the annual session as delegates, representing the medical profession of the countries allied to the United States in the World War. In this way, arrangements will be carried out so that each of the Sections will hold but one meeting on each of the days assigned for Section meetings, instead of two meetings as at previous annual sessions. For the annual session of 1919, in accordance with the foregoing plan the following Sections will meet during the morning hours of Wednesday, Thursday and Friday: Practice of Medicine; Obstetrics, Gynecology and Abdominal Surgery; Laryngology, Otology and Rhinology; Stomatology; Preventive Medicine and Public Health; Genito-Urinary Diseases; Orthopedic Surgery and Gastro-Enterology and Proctology. The following Sections will meet during the afternoon hours on Wednesday and on Friday, and along with the Sections already named during the morning of Thursday: Surgery, General and Abdominal; Ophthalmology; Diseases of Children; Pharmacology and Therapeutics; Pathology and Physiology; Nervous and Mental Diseases; Dermatology; Miscellaneous Topics.

At this conference of the Secretaries of Sections, the following rules were formulated, to be submitted to the several Sections for adoption as standing rules of the Sections. These standing rules, it will be noted, define with more exactness provisions which already are incorporated in the By-Laws of the Association.

1. No paper shall occupy more than fifteen minutes in its presentation before the section (Section II, Chapter XI of the By-Laws, "The time allowed for the presentation of a paper before a section shall be limited to fifteen minutes," shall be mandatory) with the exception that the time may be extended by the unanimous consent of those present when the speaker is an invited guest of the section. The section shall not exercise its privilege to extend the time for the discussion of a paper beyond the time allowed (five minutes) but this time limit shall be mandatory.

2. With the exception that the reader of the paper may be permitted to close the discussion, a Fellow shall be permitted to take part in the discussion of a paper once, and only once.

3. Any Fellow who desires to discuss a paper shall be required to give, in writing, his name together with his home and local annual session address to the Secretary of the section before he is given the floor. This rule shall be strictly enforced when for the first time at an annual session a Fellow takes part in the discussions of the section.

4. Section 2, Chapter XII, "Each author shall hand his paper to the Secretary of the section immediately after it is read" shall be amplified and emphasized, and shall be construed to require that each author must present to the Secretary of the section a finished copy of his paper before he is permitted to present his contribution to the section.

5. Each author shall be required to send a full synopsis of his paper to each of those listed in the official program to open the discussion of the paper, and these synopses shall be mailed to those assigned to open the discussion at least ten days before the first day assigned to the meetings of sections.

6. The Secretary of the section shall inform himself as to whether or not each member of the executive committee of his section expects to be in attendance at each annual session of the Association and shall transmit to the chairman of the section the information he receives, reporting both who of the executive committee of the section plans to be in attendance, and also who will *probably not be present.*

7. The Secretary of the section shall mail a copy of the rules of the section to each Fellow who is assigned to a place on the program of the section.

8. The rules of the section shall be binding on the Secretary of the section who shall have no option but must enforce them.

The Council on Scientific Assembly assigned two meetings of the Section on Miscellaneous Topics for the 1919 annual session for the presentation of a program on Industrial Medicine and Surgery, and appointed the following officers for these meetings: Chairman, Dr. Harry E. Mock, Chicago; Vice Chairman, Dr. David L. Edsall, Boston; Secretary, Dr. Otto P. Grier, Cincinnati.

The Council recommends to the House of Delegates that the maximum number of papers, including addresses, on the program of any one section shall hereafter not exceed twenty-five. In order to make this recommendation effective, the Council suggests that, if the House concurs in this recommendation, Section 12, Chapter XI, of the By-Laws shall be amended so that it shall read:

The number of papers including addresses, on the program of any section shall not exceed twenty-five.

The Council further recommends to the House of Delegates that the standing rules for the guidance of the Council on Scientific Assembly which were adopted at New York, June 17, 1917, shall be amended by deleting the second of these rules and modifying the present third and fourth rules so that the standing rules for the guidance of the Council on Scientific Assembly shall read:

1. The term "unit" shall signify a single meeting of a section at an annual session.
2. The sections of the Scientific Assembly shall be limited at each annual session to the maximum number of three units.
3. The sections shall not hold more than one meeting on each of the days of the annual session during which section meetings are held.
4. The Council on Scientific Assembly shall apportion the morning and afternoon units at each annual session to the several sections.

In compliance with the request of the Section on Genito-Urinary Diseases, the Council recommends that the name of this section shall be changed to the Section on Urology, and that in order to make effective this recommendation, Section 1, Chapter XI, Item 13, of the By-Laws shall be amended by deleting the words: "13. Genito-Urinary Diseases" and substituting therefor the words "13. Urology."

Respectfully submitted,

E. S. Judd, Chairman,
George H. Simmons, Roger S. Morris,
J. Shelton Horsley, Alexander R. Craig.

Report of the War Committee of the American Medical Association

Dr. Hubert Work, Colorado, Chairman, presented the report of the War Committee, which was referred to the Reference Committee on Reports of Officers.

The report follows:

To the Members of the House of Delegates of the American Medical Association:

Since the report submitted to this House of Delegates last June, according to the records of the Association, the applications for commissions in the Medical Corps of the Army were: June, 2,416; July, 2,841; August, 3,814; September, 4,171; October, 3,113, and during November, the month of the Armistice, 632; total, 16,987 commissions from June 1, 1918, to the cessation of hostilities.

The American Medical Association has been the center of information concerning medical military matters for physicians. Replies to individual inquiries have involved the activities of several of the departments at the Association headquarters, and letters to individual physicians during the period of hostilities frequently numbered over 100 each week. In addition, since last June, more than 5,000 pamphlets covering information pertaining to entrance into the Medical Corps were distributed in response to individual requests. The expense involved, including printing, postage and other items, has been borne by the Association.

The American Medical Association supplied state and county organizations with detailed information concerning the physicians in their own communities who were available for civil and industrial practice, and has cooperated with these branch organizations in enlisting the services of additional physicians where the needs of a locality could not be met by physicians still remaining in civilian practice in these communities.

On the suggestion of the officers of the Association, the Provost Marshal-General requested the Surgeon-General of the Army to assign a medical officer to the office of the Provost Marshal-General, in order that that medical officer might act as an advisor on medical questions arising under the Selective Service regulations. Col. Frank Billings was first assigned to this position. From this beginning, the medical division of the Provost Marshal-General's office was created on August 1 last, which, when the armistice was signed, had a personnel of four medical officers and five enlisted men and clerks. The functions of this medical division related to the selection and induction of registrants into military service, and included the recording and computing of the statistical data incident to that work. This medical division in the Provost Marshal-General's office brought about intimate working relations between these two offices. Through the coordination which it made possible, the examinations of registrants by the Selective Service Boards and those made at the cantonments and camps by the army medical officers were standardized. Your Committee congratulates the Association, through this House of Delegates, on the nationwide service which the Association has rendered, especially in that its organization was made available for assembling and proving medical data to the executive heads of several Federal departments which required the cooperation and assistance of the medical profession both in caring for the force under arms and in the execution of the Selective Service regulations. The work of the Association elicited the following comment in the Second Report of the Provost Marshal-General to the Secretary of War, on the Operation of the Selective Service System to Dec. 20, 1918. After announcing that the medical profession is credited with supplying 4,246 of the 13,564 members of the local boards (31.3 per cent.), and in addition, that there were established 155 district boards on each of which there was at least one physician, and 1,319 advisory boards with a personnel of 9,577, the report states:

"At this point a tribute is due to the American Medical Association. From this Association came the suggestion for medical advisory boards and cordial assistance in their selection. THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, with a circulation of 66,000 copies, has been a valuable medium of information between this office and the medical men who discharged the duties of the profession to the government through the draft. The medical profession has responded and served in a devoted manner that has received universally favorable comment. It is gratifying to note the part which the Association has taken in thus assisting to raise our great Army, as well as its valuable contribution to the war generally."

The Surgeon-Generals of the Army, of the Navy and of the Public Health Service, have given similar recognition of the cooperation which the Association has rendered their corps.

In submitting this, its final report, the members of the Committee desire to express to this House of Delegates their appreciation of the opportunity to serve the profession and the Nation which appointment on the Committee afforded.

Respectfully submitted,
HUBERT WORK, Chairman,
A. R. MITCHELL,
FRANK BILLINGS,
WENDELL C. PHILLIPS,
Ex-officio { ARTHUR DEAN BEVAN, President,
A. R. CRAIG, Secretary,
GEORGE H. SIMMONS,
Editor of THE JOURNAL.

ADDENDUM

Before proceeding with the business of the House, the Speaker announced the following Reference Committees:

SECTIONS AND SECTION WORK

George D. Head, Chairman	Practice of Medicine
S. R. Roberts	Georgia
J. B. Blake	Massachusetts
L. S. McMurtry	Kentucky
John Ridlon	Section on Orthopedics

RULES AND ORDER OF BUSINESS

J. Rilus Eastman, Chairman	Indiana
G. Wythe Cook	District of Columbia
S. W. Welch	Alabama
Joseph R. Morrell	Utah
F. LeMoyne Hupp	West Virginia

MEDICAL EDUCATION

J. H. J. Upham, Chairman	Ohio
J. R. Phelps	U. S. Navy
George D. Stewart	New York
Edward B. Heckel	Pennsylvania
Franklin E. Murphy	Missouri

LEGISLATION AND POLITICAL ACTION

Thomas S. Cullen, Chairman	Maryland
Clarence Pierson	Louisiana
Charles E. Humiston	Illinois
Frank Y. Gilbert	Maine
Charles S. Huffman	Kansas

HYGIENE AND PUBLIC HEALTH

J. W. Schereschewsky, Chairman	U. S. P. H. S.
H. A. Royster	North Carolina
C. D. Selby	Ohio
L. M. Halsey	New Jersey
V. G. Vecki	California

AMENDMENTS TO CONSTITUTION AND BY-LAWS

Floyd M. Crandall, Chairman	New York
F. A. Winter	U. S. Army
P. W. Tomlinson	Delaware
J. M. Aiken	Nebraska
I. C. Chase	Texas

REPORTS OF OFFICERS

Hugh T. Patrick, Chairman	Section on Nervous and Mental Diseases
Rock Sleyster	Wisconsin
J. N. Hall	Colorado
Edgar A. Hines	South Carolina
J. E. Lane	Connecticut

CREDENTIALS

C. P. Meriwether, Chairman	Arkansas
D. E. Welsh	Michigan
Charles R. Hume	Oklahoma
F. T. Kidder	Vermont
John C. Rockafellow	Iowa

MISCELLANEOUS BUSINESS

W. B. Russ, Chairman	Texas
Southgate Leigh	Virginia
F. T. Rogers	Rhode Island
Thomas H. Halsted	New York
H. B. Gibby	Pennsylvania

After announcing the Reference Committees, the Speaker called on the Vice Speaker, Dr. Dwight H. Murray, New York, to take the Chair.

Previous to delivering his address, the Speaker stated that the Ad Interim Committee by postal vote approved the appointments by the Board of Trustees of a special Committee on Revision of the Pharmacopeia.

Address of the Speaker, Dr. Hubert Work

The Speaker then delivered the following address, which was referred to the Reference Committee on Reports of Officers:

To the House of Delegates of the American Medical Association:

After fifteen consecutive years of service in this House, as a Delegate, on the Judicial Council, and as Speaker, may I say a word intended to be constructive in character.

This Association has long been an ornament to the medical world. The probity of its officers, its scientific attitude and unequaled Journal have compelled its recognition as the finality of ethical, scientific medicine in the United States.

MILITARY SERVICE OF THE ASSOCIATION

The world war called to it, tried it and proved the quality of its organization and personnel. Thirty-five thousand physicians volunteered for military service and went away. Twenty thousand volunteered for draft service at home. Sixty thousand more volunteered for limited service, to do what they could. More than 100,000 physicians from our total of 148,000 served, or pledged themselves for service.

The question of the profession's loyalty to its country has been answered. Its loyalty to organized medicine is on trial.

The uniformed 35,000 returning find their personal relations changed. Communities adapted themselves to their absence; they became unnecessary. The routine practice of medicine had contracted itself, for much of it relates to betterments in health, rather than to immediate conservation of life. While returned physician-soldiers are received with pride and often with affection, business is not emotional but is governed by the laws of business. Many physicians not only gave their time to the government, but their niche in the community also, and must hew a new one there or elsewhere. Some put away with their uniforms the spurs of ambition and the anticipation of future successes. Our sons, who went away as boys, return as men. The world has changed them and changed to them. These new men will have new thoughts and do new things, they have been reconstructed and will in turn readjust this Association and also their relations to the practice of medicine.

A NEW ERA

Thoughtful men agree that we are entering on a new era in medicine which will compel the closest interrelation between physicians, hospitals, nursing and the public. It is not probable that practice will again be followed as heretofore. The time is passing when the personality and skill of a single physician will satisfy his patrons, or command a fee measured only by the patient's ability to pay, for skill is no longer limited to a few. Teamwork of physicians and the evolution of the hospital, which provides all domestic and medical service, has given the public an economic idea which will hereafter direct the practice of medicine. Cities and large towns already have their hospitals; rural communities soon will have, state aided no doubt, for it is a short step from state care of the insane to the state care of all sick. The greatest future concern of this Association may be its direction and oversight of hospitals; the practicable achievments of its five councils, if you please, brought to bear on common centers for the cure of the sick.

BUREAU OF HOSPITALS

Should this House recommend to the Trustees that a Council on Hospitals be created?

Such a bureau should comprehend hospital architecture, construction, plumbing, organization, contagious diseases, general medicine, surgery, interns, practical nursing, trained nursing—in short, a bureau of information for the standardization of all detail relating to the hospital care of the sick. Standards fixed by a permanent council of experts, directed by this Association, would compel hospital directors to comply with their requirements in order to secure a coveted rating. It would avoid the expensive canvass and tedious propaganda now being conducted jointly by the American Medical Association and the American College of Surgeons. The weight of the Association's influence behind this movement, directed in the field by selected full-time men, would give the public assurance and a point of appeal on hospital questions.

Duties of this bureau would be: consultations with municipalities proposing to build; with industrial companies, planning sick care for their employees, and with state governments. Proprietary and sectarian hospitals contemplating enlargements or troubled by incompetent management would welcome the efficiency expert of such a bureau, while philanthropists could know that their bequests were worthily bestowed and would be honestly conserved, as by a trust.

GRADED SCHOOLS

Our public schools are teaching trades. Premedical training should assume direction there also. The necessary mental discipline may be obtained from studies essential to medicine, and time should not be occupied on branches studied only for a degree. Courses in the grades, high schools and colleges are so loosely knit that the first year in high school and college is largely wasted in fitting for the last three years. Could one year be safely clipped from the grades, one from the high school and one from the college course of those who would study medicine?

We have an inactive joint subcommittee with the National Educational Association which might well functionate on the pressing question of premedical education. A majority of common school boards in the United States have one or more physician members. This Association can bring about through them new educational policies it may choose to inaugurate.

UNDERGRADUATE MEDICAL EDUCATION

It is evident that the relentless pressure of this Association for higher college and professional standards, with their time and financial exactions on the one side and the decrease in disease through preventive medicine on the other, are grinding between them students and physicians of average opportunities.

Medical requirements for practice demand at least seven years of schooling beyond the high school. In some universities, two degrees and nine years' time are demanded for graduation. That included in the average medical college curriculum costs so much time and money that only the rich can attain it. The crossroads communities will soon have no qualified physician, and from necessity will revert to the opportunist and the midwife. Should undergraduate schools undertake to finish specialists in medicine, presumably the function of postgraduate schools?

The primary function of a physician, to cure the sick, is submerged by the scientific ambition to diagnose rare diseases or a few ailments, with an inevitable loss of perspective necessary to the accomplished diagnostician. Failure to gain practical knowledge of the simple things in medicine tremendously depreciates recent graduates. American medical colleges are graduating medical scientists, and our hospitals, nursing specialists, both technicians and both out of reach of the family of average means.

NURSES

We should recognize that conditions confronting communities affecting physicians, apply equally to nurses. Certain training schools require for graduation a high school diploma for admission followed by three years' training. The average nurse is graduated with a feeling that her period of service has ended and her reign is begun. This is an intolerable economic attitude. The average householder cannot afford to employ servants for servants indefinitely, and he is already looking to the medical profession for relief in home care for his sick.

The public needs practical nurses, trained in cleanliness and taught to do what is necessary to be done for the comfort of the household, including its sick. There ought to be provided six months or more schooling in every small city, for teaching girls who have good average ability but not necessarily overschooling to do the common every day things in nursing. It was done in a war emergency recently and is a practical suggestion.

NEED FOR THE GENERAL PRACTITIONER

The general practitioner of medicine must come back, and a temporary substitute for the stricken mother must be trained and qualified for duties associated with the sick in the home. If we fail to initiate these changes intelligently, economic necessities will do it blindly, and we will submit to it but not direct it.

The American Medical Association is directed by the highest type of scholarly men, but it must not be operated exclusively for them and should address itself to the necessities of a majority of our medical men, who need help most and who are doing the most of medical work. It would appear that this Association could do more at its annual meetings than discuss scientific papers.

The medical profession of the United States numbers about 148,000. Of these, 82,000 are members of the American Medical Association, 70,000 are subscribers to The Journal, 45,000 are Fellows of the Association, and approximately 4,000 attend its annual meetings. For some years these have been relatively stationary figures and call for inquiry into the causes.

The question is frequently asked: "Is the organization fostered so that its Journal may thrive, or is The Journal the agent of the Association?" The presentation of able papers to be printed and made accessible to 70,000 physicians who do not attend annual meetings has great value, but is that enough for 80,000 organized physicians, to accomplish? It is apparent that we must answer to the public many questions, all of which are embraced in the general case, Shall the American Medical Association assure to the public, qualified physicians, nurses and standardized hospitals, at prices it can afford to pay?"

PHYSICAL EDUCATION OF CHILDREN

The physical examination of registrants for the late war emphasized the importance of medical supervision of grade schools for physical correction. Almost 30 per cent. of registrants appearing before local boards were rejected for military service. Nearly 9 per cent. of those inducted were rejected at camp. Thirty-eight per cent. of young American men were disqualified because of vicious habits of development, correctable defects and preventable diseases, easily detected by a schoolteacher and readily righted in their incipiency by physicians. The physical development of schoolchildren is more necessary than textbook education—a duty which should be suggested and accomplished by physicians as an organized movement, again made possible to this Association through its medical members of school boards, and its joint committee with the National Educational Association.

AMERICAN COLLEGE OF SURGEONS

Unstinted commendation is due the American College of Surgeons for its intelligent energy and liberal expenditures of money directed toward the standardization of hospitals. It has fixed for itself also the important duties of compelling the qualifications of its surgeon members and of creating a sentiment to prevent the secret division of fees. The fixing of qualifications for surgeons may be safely left with this college, as its requirements are exacting. The standardization of hospitals is urgent. The secret splitting of fees requires two parties to accomplish it. Let those who refer cases wash their own hands also.

AMERICAN DENTISTS

Our kinsmen of the profession of dentistry took their place in the world crisis, without hesitation and to great purpose. They demonstrated their quality as professional men, their loyalty as Americans, and their right to be recognized as a specialty in medicine.

The three essentials for a soldier are serviceable teeth, a good stomach, and strong, flexible feet. Organized dentistry saw to it that the first necessisty was promptly, cheerfully and gratuitously provided for registrants.

STATE AND SECTION SECRETARIES

State and section secretaries each should hold annual midwinter meetings for the discussion of problems pertaining, respectively, to the development of the state and county branches and the scientific assembly. The reason for this is obvious—the intimate connecting up of the American Medical Association with its component and constituent societies in an attempt to dispel the lethargy that is settling on medical organizations.

I hope that the House will consider at this session the future relations of the American Medical Association to the public in its entirety, and particularly to outlying communities. If you believe it to be desirabe, set apart a few hours, resolve the House into a committee of the whole, freed from program and time exactions, for the discussion of ideas you doubtess entertain for the protection and advancement of the profession through this Association.

The American Medical Association must either become a reminiscence or adapt itself to the requirements of modern medicine as the future may apply it to arising conditions. The latter should be the vision of the House. I particularly wish to see this House of Delegates assume its rightful function in initiating and defining the policies of the American Medical Association.

I believe there are duties before the Association, professional rather than scientific, which will call for exceptional devotion, patient service and skilful guidance. But my official connection with you, which must soon terminate, has assured me that no body of men has keener insight, clearer vision, or higher motives. And as I thank you for your countless courtesies, may I also urge you to weigh well your responsibilities.

Address of the President, Dr. Arthur Dean Bevan

The Speaker then resumed the Chair and introduced Dr. Arthur Dean Bevan, Illinois, President of the Association, who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

Mr. Speaker and Members of the House of Delegates:

I desire to present quite informally to you some of my impressions of the work of the Association, with some suggestions that naturally grow out of these impressions.

In the first place, during my connection with the Association, especially during the last year as President of it, I have been very greatly impressed by the soundness of our scheme of organization. Our organization is thoroughly representative and democratic. It represents better than any other plan that could be devised the medical profession of the country. I feel, however, that few of us realize the enormous size of the task and the great responsibilities of the American Medical Association. To meet these responsibilities and to realize these possibilities for good, both for the profession and for the people of this country, we must have an imagination and a courage, and we must plan our organization to meet the much larger and broader requirements than any of us have as yet dreamed of.

The activities of the Association will increase in number and magnitude from year to year, and we must plan to anticipate this fact and build machinery to meet these very great demands as they are coming.

We already have, as Dr. Work has told you, more than 80,000 members; we shall soon have 100,000 members. We have created in the American Medical Association an instrument, the purpose of which is to give to the people of this country the benefits of modern scientific medicine. We have created an instrument with which we can elevate the standards of medical education and medical practice and conserve in the best sense the interests of the profession. We have created an instrument through which we can stimulate scientific medical research and improve the character of American medical literature.

The value of our scheme of organization was tested by the war. The organized profession of the country promptly met the demands of the government, and within a short time about 50,000 medical men and women responded to the call

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SATURDAY, JUNE 14, 1919

MOSQUITOES AND CULICIFUGES

The surest and safest way to avert the menaces to human health and comfort which are presented by the mosquito lies in its eradication. However ideal diverse plans for this purpose may be, even the most enthusiastic hygienist will admit that they cannot be carried out except by a long, carefully conducted antimosquito campaign which will extend over years rather than days or weeks. Meanwhile, occasions arise when individuals and groups of men must be protected, if possible, from the annoyance and the dangers of mosquito bites. Here, as in so many other instances, wartime conditions have pointed to the urgent need. Troops compelled to travel through malarious regions, soldiers posted in places where mosquitoes abound, and civilians driven into the abodes of these insects, may demand immediate, though only temporary, protection.

The enemy which cannot be destroyed can sometimes be repelled. Herein lies the usefulness of the culicifuge—a preparation intended to ward off the attacks of mosquitoes. Recently many chemical preparations have been tested at the Lister Institute in London, with respect to their suitability for this purpose. Bacot and Talbot,[1] who undertook this important investigation, which also included the undoubtedly disagreeable task of serving as subjects for the tests, found a number of readily available mixtures that proved to be fairly satisfactory, although none gave complete protection. The method of testing them consisted in ascertaining the number of bites on treated and untreated bared arms from caged hordes of mosquitoes. The "treatment" involved coating the exposed arm from the wrist to the elbow with the alleged culicifuge. In this way some efficiency was demonstrated in preparations in which the active ingredients were oil of cassia and camphor, oil of cassia and peppermint, oil of eucalyptus and citronella with phenol, crude coke-oven naphthalene and camphor, light wood oil, and oil of turpentine, as well as a number of proprietary products of unrecorded composition.

From a practical standpoint it was found that fluid preparations were inconvenient and tended to be wasteful in application. Soap preparations, unless very soft, are apt to be difficult of economical use, and in either case are more readily dissipated by perspiration than waxy or greasy preparations. Culicifuges prepared with grease are more easily applied but are not so lasting as those put up with wax. Soft wax preparations, correctly adjusted to the temperature in which it is proposed to use them, are most suitable for outdoor use, especially in the case of troops. The retarding of volatilization caused by the admixture of the active ingredients with wax or grease is a distinct advantage, but care must be exercised in respect to the relative proportion of active substance to the base. The golden rule, Bacot and Talbot add, is to use as much of the active constituent and as small a quantity of the inert base as is consistent with convenient application and the prolonging of the period of efficiency, not, as most proprietary compounders appear to think, as little as possible of the active constituent.

The preliminary observations of the British entomologists indicate that the period of protection with products such as those here described cannot be depended on to extend over more than two hours. This may nevertheless be sufficient to offer an enormous advantage in certain regions. It has generally been assumed heretofore that the culicifuges act by presenting a repulsive odor to the insects. Bacot and Talbot favor the suggestion, however, that the protection afforded does not result from a dislike of the mosquitoes to the culicifuge but from its obscuring the attractiveness of the human odor. The mosquito season is at hand again with us, so that the new suggestions as to these tested palliative measures may be both timely and helpful.

MITOCHONDRIA

Microscopic anatomy, which is still diligently inquiring into the nature of cell structure, has recently shifted its interest in no small measure from the nucleus to the cytoplasm. As a result, a definite type of cytoplasmic granules now known as mitochondria, a term first introduced by Benda in 1899, has become recognized and has been extensively studied. E. V. Cowdry[1] has recently summarized our present knowledge concerning these bodies. They have a variety of shapes: sometimes they are filamentous or rodlike, and again pear-shaped or granular. While their size varies greatly in different cells and even in a single cell, it seems to be the rule that the cells of certain tissues in different animals have similar mitochondria. Cowdry believes that here is shown a correlation of cellular function and morphology.

The fundamental importance of mitochondria is evidenced by their wide distribution. They have been demonstrated in plants, from the thallophytes to the spermatophytes, and in animals, from protozoa to man. Within the cell these variable bodies are generally indefinitely arranged; in gland cells, however, they usually show a polar distribution. Cowdry suggests that this distribution may indicate cell polarity and form a basis for the interpretation, according to mitochondrial distribution, of the origin or position of intracellular activities. He also maintains that their position and relation with respect to other cell constituents may make them an index of the deviation from the normal in cells.

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[1] Bacot, A., and Talbot, G.: The Comparative Effectiveness of Certain Culicifuges Under Laboratory Conditions, Parasitology **11**: 221 (Feb.) 1919.

[1] Cowdry, E. V.: The Mitochondrial Constituents of Protoplasm, Contributions to Embryology, 8, No. 25, Carnegie Institution, Washington, 1918.

Some interesting data as to variations in the amount of mitochondria have been gathered. Wherever there is marked cellular activity, as in cytomorphosis and regeneration, the amount increases; but where cellular activity is lessened, it decreases. Again, these bodies occur in inverse ratio to the fat content of cells. If it be assumed that the fat content of cells increases as the respiratory activity diminishes, it is noted that mitochondria are associated with high degrees of respiratory activity. Chemically, these bodies are composed of a combination of phospholipin and albumin, as has been demonstrated chiefly by response to various stains and reactions to fat solvents, acids and certain salts. While closely similar in plants and animals, there is no doubt that the chemical composition varies slightly. The interest of modern physiologic chemistry in phospholipins happily makes possible in this case the correlation of physiologic chemistry and cytology, the importance of which Wilson[2] has so constantly emphasized.

The demonstration of the chemical nature of mitochondria has rendered untenable many of the older views of the genesis of fibrils, pigment, secretion, etc., from them. Tentatively, it may be said that they are closely related to the fat metabolism in the cells; but this is probably not their only metabolic relationship, since they seem to be present in plant and animal cells regardless of the type of metabolism. How essential a part they play in metabolism cannot be stated definitely at this time. As has been mentioned, they seem closely related to respiratory activity. Chemically they are well suited to change by oxidation or reduction. They are diminished in amount by agents that decrease respiratory oxidations, such as chloroform or ether. As mitochondria are a far more sensitive index of cell activity and injury than is the nucleus, they no doubt will prove of increasing interest in pathology. The studies of the mitochondrial content of the cells of the nervous system, the pancreas and the thyroid seem to be yielding promising results. As regards the characteristics and significance of mitochondria in tumors, Cowdry holds that the scattered observations so far at hand permit of no final statements. Here investigation of tumors in animals under controllable experimental conditions may prove of great value. Enough has been said to show that a new field for work has been laid open for the pathologic anatomist and microchemist.

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[2] Wilson, E. B.: The Cell in Development and Inheritance, New York, The Macmillan Company, 1911.

GRADUATE MEDICAL INSTRUCTION IN THE UNITED STATES

During the last few months, reference has been made in The Journal to increased activities in the development of graduate medical instruction in England and France. Both of these countries have established what is termed an "Interallied Fellowship in Medicine,"[1] providing graduate courses for qualified medical officers of the allied countries having armies in Europe. In London an elaborate program has recently been adopted[2] which calls for a graduate medical association; cooperation of all medical schools; increased privileges for graduate students; a pooling of all hospital facilities, and the securing of cooperation of America and France. Paris also is endeavoring to make that city more prominent as a center of postgraduate medical instruction.

We note with interest these laudable efforts to develop graduate medical instruction in London and Paris, and will rejoice if these efforts are successful. At the same time, however, we must not overlook our own shortcomings in this particular field. For many years the United States lagged behind other countries in improving medical education, but has partly redeemed itself by the almost revolutionary changes in undergraduate medical education through which commercialism has practically disappeared. An equal or greater improvement is essential in graduate medical instruction. Private graduate schools are not satisfactory and do not meet the present-day requirements. Harvard, Pennsylvania, Minnesota, California and Tulane have established graduate medical schools, but in none of them has graduate teaching developed to the extent that it has in some European cities. In the large cities of this country the student is still compelled to wander from school to school or from hospital to hospital to find the courses desired. To obtain sufficient clinical material in a desired specialty he is compelled to seek courses in several institutions rather than in one, and even then usually finds that the courses are held at such times that he cannot register for them. As a consequence, he cannot utilize all his time without registering for courses he does not want. The usual result of his search has been a waste of time, a loss of objective, and disappointment.

In many of our large cities, an abundance of clinical teaching material is now going to waste which, with a proper organization, could be utilized in graduate courses to the great benefit of the medical profession, and ultimately to the public in the development of more skilled physicians. The situation in each city calls for (*a*) affiliation of all hospitals and schools having clinical teaching facilities; (*b*) organization of a single graduate medical school; (*c*) special provision for the needs and convenience of graduate medical students; (*d*) generous opportunities for the graduate student to develop skill by actually treating or operating on patients under competent instruction, and (*e*) the listing of all courses in such a manner that related courses do not conflict. Finally, when graduate medical instruction has been more satisfactorily developed, we should seek to cooperate with other countries in the exchange of teachers, clinical assistants and graduate students. Especially should there be a close cooperation with our Latin neighbors of Central and South America. The latter countries are showing a desire to establish both commercial and educational relations with the United States. In the lines of medical education, especially, everything should be done to encourage this desire and to make the relations beneficial and permanent.

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[1] Interallied Fellowship in Medicine, J. A. M. A. **72**: 588 (Feb. 22); 742 (March 8); 1388 (May 10) 1919.

[2] Graduate Medical Education in London, J. A. M. A. **72**: 1478, 1484 (May 17) 1919.

GLYCURESIS VERSUS GLYCOSURIA

Not long ago we commented on the suggestion of S. R. Benedict[1] that progress in the study of carbohydrate metabolism would be more rapid if the term "glycosuria" were abolished. According to his contention, some sugar elimination, however small, takes place continuously through the kidneys. This contention has been advanced by others to explain the finding of reducing substances in the urine of presumably healthy persons. Since glycosuria implies a sudden point at which sugar appears in the urine, a term is needed to express the constant presence of sugar in normal urine and an excess of sugar elimination above normal limits. Benedict accordingly coined the expression "glycuresis" to signify the increased absolute elimination of sugar per hour as compared with the control period. The experimental data indicated that food ingestion is the controlling factor in physiologic sugar elimination.

These interesting conclusions were not entirely convincing owing to the paucity of observations on record. It must not be assumed that the physiologic urinary sugar content is significant because of its absolute value. The latter falls below the limits of all but highly delicate methods of analysis; indeed, it may be questioned whether the small amount of "reducing substance" detected in normal urines is in reality glucose.

In the midst of this uncertainty the evidence in favor of the views of Benedict has been supplemented by the observations of Bailey,[2] which seem to indicate that a normal person, when uninfluenced by food or fluid intake, has reducing substances present in equal concentration in both blood and urine. Following the ingestion of glucose, urine sugar parallels that of the blood up to the latter's concentration of from 0.16 to 0.17 per cent. As the blood sugar increases beyond this point the kidneys actively excrete sugar. This excessive excretion decreases as the hyperglycemia passes off. Glycuresis, says Bailey, is a kidney function and is excessive in diabetes and hyperthyroidism. It is greatly decreased in nephritis and with deficiency of the thyroid or hypophysis. The concentration of blood sugar at which glycuresis occurs varies in different individuals, and is influenced by disease, being abnormally low in early diabetes, high in diabetes of long standing, in nephritis, and with deficiency of the thyroid or hypophysis. Of late the blood sugar has received preeminent attention in the accurate determination of the capacity for carbohydrate metabolism. Perhaps the study of the urinary output will again claim an equal share of importance in the study of carbohydrate tolerance.

Current Comment

THE VICTORY MEETING

As this issue of The Journal goes to press the Victory Meeting is in session at Atlantic City. The registration up to 4 o'clock Monday was 1,265, and on Tuesday, over 3,000. The meeting, therefore, promises to be well attended, and the interest displayed by those physicians fortunate enough to be in attendance indicates a session of great scientific and practical importance. In this issue appear the minutes of the first meeting of the House of Delegates, Monday, June 9, and the address of the president, Dr. Alexander Lambert, New York, delivered Tuesday night. The remainder of the minutes, both of the House of Delegates and of the Scientific Assembly, will appear in the issue for next week.

THE PROTEINS OF RAGWEED POLLEN

The establishment of a relationship between hay-fever and the pollen of plants has brought about an unusual interest in the chemistry of the pollen grains. If the phenomena of this widely prevailing disease are to be referred correctly to the specific etiologic factors, it will become necessary to know what components of pollen are responsible for the morbid manifestations. Opinion has been somewhat divided on this point. Some have believed that the harmfulness of the pollen is due to a toxic agent of comparatively simple constitution, although the majority of the writers in recent years seem to be committed to the belief that some protein in the plant structures is at fault. Obviously, clarity could be infused into the discussion if the chemical components of pollen were known and isolated, so that direct experiments could be performed with them. Pollen is, however, not very readily obtainable in large amounts for investigation, so that progress has been slow. Recently Heyl[1] has obtained an albumin, a proteose and a glutelin from the pollen of the ragweed (*Ambrosia artemisiaefolia*). A mixture of the albumin and proteose was demonstrated to have antigenic properties, so that anaphylactic reactions could be brought about by them in animals. This observation is of interest in view of the earlier assertion that anaphylaxis cannot be produced with pollen extracts.[2] Various bases, including histidin, lysin, arginin and agmatin, are also present in pollen; but for the present it seems more likely that the potent factor in the untoward responses elicited by the grains is associated with their proteins, which ought to receive thorough investigation as a preliminary to the further development of immunologic or preventive measures for treating the harm attributable to them.

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[1] Benedict, S. R.; Osterberg, E., and Neuwirth, I.: A Study of the Urinary Sugar Excretion of Two Normal Men, J. Biol. Chem. **34**: 217 (April) 1918.

[2] Bailey, C. V.: Studies on Alimentary Hyperglycemia and Glycosuria, Arch. Int. Med. **23**: 455 (April) 1919.

TOXIC MANIFESTATIONS OF ARSPHENAMIN

The death of the patient which has been observed in some instances to follow the administration of arsphenamin has occasioned much concern to those who are compelled to administer this potent drug in human therapy. Among the symptoms observed in these cases of acute collapse are dilatation of the heart and a fall in systemic blood pressure. So far as can be learned from animal experiments, there may be increased pulmonary blood pressure. The reaction of the internal organs seems to be variable. The occasional toxicity of preparations of arsphenamin has been attributed to intermediary compounds employed or arising during the process of manufacture. A number of these have been tested experimentally at the Hygienic Laboratory of the U. S. Public Health Service. The report is that they are not very poisonous and cannot account for the variable toxicity of different samples of arsphenamin which may or may not contain traces of one or more of them.[3] The possibility that the acute reactions often seen after arsphenamin administration in the clinic may be attributable to precipitates forming in the blood stream has also been suggested by several investigators; but it receives no support from the government pharmacologists. They charge the reaction to the alkalinity of the solutions used for injection and to the specific action of the arsphenamin itself. Wherever the real explanation of the unexpected toxicity may be proved to reside, the management of the symptoms of collapse is a question in practical therapy. Epinephrin has commonly been employed to combat the condition. Jackson and Smith[3] are, however, inclined to recommend a trial of tyramin in suitable cases. Hewlett[4] has already employed it as a blood-pressure raising substance in hypodermic doses of 60 mg. (1 grain). The systemic pressure does not rise so high and the danger of acute dilatation of the heart is not so great as with the intravenous injection of epinephrin, according to Jackson and Smith, but the effects of tyramin are much more lasting. These investigators are extremely cautious in their advice, however. While they are by no means sure that the use of the drug might in any degree decrease the number of fatalities that from time to time occur under the use of arsphenamin, yet in their own words, they believe it is more logical and more likely to be of real value in these cases than is any other drug with which they are acquainted. This conclusion is far from convincing; but when a real danger exists, every reasonable prospect of averting it deserves some serious consideration.

Medical Mobilization and the War

Personnel of the Medical Department

For the week ending June 6, there were 14,906 officers in the Medical Corps, a decrease of 400 from the previous week. The Medical Reserve Corps contained 2,061 officers. The total number of medical officers discharged since the beginning of the war is 17,355.

Legislation to Provide Civilian Medical Care for Soldiers on Furlough

The Secretary of War is authorized to arrange for the employment of civilian medical authorities and facilities for the care of officers and enlisted men of the army who require medical attention while on furlough, in a measure presented to Congress by Congressman Rogers of Massachusetts. It is required that the disability originate in the line of duty.

Promotions to Be Resumed

The Surgeon-General has been authorized, as have been other corps commanders, to resume promotions of officers under certain restrictions. For a time after the signing of the armistice no promotions were made, but the ban is off if requirements are met. The chief requirement is that the officer recommended for promotion must be performing the work of an officer for the rank for which he has been recommended.

General Hospitals Closed

U. S. General Hospital No. 18, Waynesville, N. C., and U. S. General Hospital No. 35, West Baden, Ind., have been officially closed.——The hospital at the U. S. Quartermaster Terminal, Sewell's Point, Va., is to be transferred to the U. S. Public Health Service.

Bill for Medical Department of the Navy

A bill has been introduced by Congressman George Darrow of Pennsylvania to increase the efficiency of the Medical Department of the Navy. The President, authorized to appoint officers in the Hospital Corps of the Navy, in addition to chief pharmacists and pharmacists, at the rate of one for each 2,000 officers and enlisted men in the Navy and Marine Corps. The ranks are to be lieutenant commander, lieutenant, junior grade, and ensign. They are to perform such duties in the Hospital Corps as may be prescribed by the Secretary of the Navy.

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[1] Heyl, F. W.: The Protein Extract of Ragweed Pollen, J. Am. Chem. Soc. **41**: 670, 1919.

[2] Cooke, R. A.: Flood, E. P., and Coca, A. F.: J. Immunol. **2**: 217 (Feb.) 1917.

[3] Jackson, D. E., and Smith, M. I.: An Experimental Investigation of the Cause of Early Death from Arsphenamin, and of Certain Other features of the Pharmacologic Action of the Substances, J. Pharmacol. & Exper. Therap. **12**: 221 (Nov.) 1918.

[4] Hewlett, A. W.: *The Action of Tyramin on the Circulation of Man*, Arch. Int. Med. **21**: 411 (March) 1918.

Army Rank for Nurses

The bill to grant army rank for nurses in the army service, in which thousands of nurses throughout the country are interested, has been introduced in the House of Representatives by Representative Hernandez of New Mexico and referred to the House Committee on Military Affairs, of which Julius Kahn of California, is chairman. The measure provides: "that the members of the Army Nurse Corps shall have relative rank as follows: The superintendent shall have the relative rank of major; the assistant superintendents, directors and assistant directors the relative rank of captain; chief nurses the relative rank of first lieutenant; and nurses, the relative rank of second lieutenant; and as regards medical and sanitary matters and all other work within the line of their professional duties shall have and shall be regarded as having authority in and about military hospitals next after the medical officers of the Army, and shall wear the insignia of the rank of the Army to which their rank corresponds."

Sites for Military Hospitals

A report on the selection and acquisition of sites for military hospitals has just been submitted to the United States Senate by a special committee appointed some time ago to make an investigation and recommendations. The committee was directed to "investigate the selection and acquisition of sites for military hospitals, and contracts and expenditures for the repair, acquisition and construction of such hospitals and ascertain what additional hospitals facilities are required." It is officially reported that the Naval hospitals have a total capacity of 15,000 beds, while the Army has a total bed capacity of 110,000 beds. Almost one half of the beds of the Army are unused and will be turned over to the Public Health Service which is charged with the administration of the War Risk Insurance Act in the work of caring for and giving treatment to the men disabled in the war. About 80,000 discharged soldiers and sailors are entitled to this treatment. In view of this large work, the committee has recommended the erection of a tuberculosis hospital at Dawson Springs, Ky., with a capacity of 500 beds, a gift of a tract of land of 5,000 acres having been made in connection with this site. A new hospital plant at Norfolk, Va., is also recommended because of the war risk obligation and because of the fact that Norfolk has heavy demands for hospital service from men in the merchant marine, being the second largest Atlantic seaport. A hospital in or near Washington, D. C., is also recommended, which district is regarded as having insufficient hospital facilities in view of the demand. The adoption of the Speedway, or Maywood Hospital, near Chicago, also is strongly recommended. No other new sites are approved. Fire-resisting construction is recommended in so far as it is at all possible. An appropriation of $190,000 for an addition to the marine hospital at Staten Island, N. Y., and of $750,000 to remodel and adapt existing hospital facilities in and near New York City are recommended because of the large number of cases in that vicinity. The conversion of some facilities at Hot Springs, Ark., is advised. It is thought that these combined facilities will meet the needs of the reconstruction work of the government. The report is signed by Senators Hardwick, Beckham, Trammell, France and Lenroot and was presented to the Senate, June 2. Had the war continued until 1919, as was officially anticipated, the War Department would not have had sufficient hospital facilities to care for the wounded men, according to the report, but the early end of hostilities saved a large sum to the government by reason of this program.

Weekly Bulletin A. E. F. Gives Interesting Statistics

(May 26, 1919)

The *Weekly Bulletin* of the American Expeditionary Forces for May 26 gives some interesting totals.

1. From June 15, 1917, to Feb. 28, 1919, inclusive, there were 708,335 cases of disease, causing a loss of 8,277,657 days of service.

There were 225,955 cases of traumatism (including all battle casualties), causing a loss of 2,705,588 days of service, or a combined total of 934,290 cases, and a loss of 10,983,245 days of service, or 30,091 years.

2. Of the cases of disease: 90.2 per cent. returned to duty; 6.0 per cent. were invalided home; 3.3 per cent. died in hospital and 0.5 per cent. deserted.

Of the cases of traumatism: 73.8 per cent. returned to duty; 21.1 per cent. were invalided home; 5.7 per cent. died in hospital, and 0.4 per cent. deserted.

3. The average time in hospital for both classes of cases was 11.7 pays per case. Of those reported as deserted many are believed to have left the hospitals to return to the front.

4. Mumps has caused the greatest loss of days from noneffectiveness due to disease. There have been 83,202 cases of mumps, with a loss of 1,000,424 days of service in the A. E. F., from July 1, 1917, to March 31, 1919. There were only forty-three deaths from mumps during that period.

5. The greatest number of deaths from disease of all kinds was due to pneumonia. There were 28,292 cases of pneumonia, causing a loss of 622,424 days of service in the A. E. F., from July 1, 1917, to March 31, 1919, inclusive, with 12,361 deaths.

6. Of all deaths in the A. E. F., 32 per cent., or two in seven, died from disease.

Of total deaths from disease for the period June 15, 1918, to March 31, 1919, inclusive, numbering 17,691, there were: 11,786 deaths from pneumonia, or 66.6 per cent.; 715 deaths from meningitis, or 4.0 per cent.; 515 deaths from influenza, or 2.9 per cent.; 351 deaths from tuberculosis, or 1.4 per cent.; 143 deaths from typhoid and paratyphoid, or 0.8 per cent.; 64 deaths from measles, or 0.3 per cent.; 40 deaths from diphtheria, or 0.2 per cent.; 29 deaths from dysentery, or 0.16 per cent.; 27 deaths from scarlet fever, or 0.15 per cent., and 4,021 deaths from all other diseases, or 22.7 per cent. Of all wounded 1 in 14 died.

7. The average rate of venereal diseases was under 40 per thousand per year.

8. Total mental diseases, including mental deficiency, from June 15, 1917, to April 27, 1919, were 12,266 cases of which 8,076 were returned to duty.

9. Total number of cases evacuated from the front 214,487. Total number of patients evacuated to the United States to April 22, 1919, 119,974.

10. Maximum number of beds with date was 299,835 beds on Nov. 21, 1918. (Including convalescent camps, but not evacuation hospitals or other Army units) S. O. S. only.

Maximum number of patients with date was 193,026 on Nov. 12, 1918. (Including convalescent camps). S. O. S. only.

11. The maximum number of hospital centers was twenty-three on Dec. 5, 1918.

12. The maximum number of base hospitals operating at one time was 122 on Jan 2, 1919.

13. The maximum number of camp hospitals operating at one time were sixty-four, on Feb. 6, 1919.

14. The maximum number of convalescent camps was fourteen.

15. Total number of camp hospitals operated during entire period was ninety-seven.

16. Losses in A. E. F., June 15, 1917, to April 15, 1919, inclusive: killed in action, Army and Marines, 33,827; died of wounds, 14,190; wounded, 201,230; died of disease, 22,986; died of other causes, 4,281.

17. Among the medical supplies received by the A. E. F. were: ether, 913,480 pounds, sheets, 3,790,268; foot powder (talcum), 3,024,029 pounds, equal to 1,512 tons; gauze, 107,055,986 yards, equal to 61,338 miles. Unrolled it would extend nearly two and a half times round the would.

MEDICAL OFFICERS, U. S. NAVY, RELIEVED FROM ACTIVE DUTY

CALIFORNIA

Los Angeles—Janss, E.
Sacramento—Littell, J. C.
San Diego—Irvine, R. S.
San Francisco—Mager, H. A.

DELAWARE

Delaware Breakwater—Hart, G. G.

GEORGIA

Douglas—Wilson, J. F.
Marietta—Holland, R. N.

ILLINOIS

Chicago—Klaus, R. W.
Evanston—McGill, E. C.

LOUISIANA

New Orleans—Remley, G. C.

MAINE

Bath—Hannigen, R. C.

MARYLAND

Baltimore—Watkins, S. S.

MASSACHUSETTS

Fall River—Butler, G. E.
Somerville—Newton, E. R.

NEW JERSEY

Atlantic City—White, J. T.
Trenton—Douress, P. C.

NEW YORK

Locust Valley—Scudder, F. D.
Rochester—Otis, W. K.

NORTH CAROLINA

Middlesex—Lewis, S. V.
Raleigh—Procter, I. M.

PENNSYLVANIA

Johnstown—Entwisle, R. M.
Philadelphia—Pennington, J.
Rosenthal, J. M.

VIRGINIA

Petersburg—Burke, H. A.

HONORABLE DISCHARGES, MEDICAL CORPS, U. S. ARMY

Owing to a change in the plan of sending this material from the Surgeon-General's Office to The Journal, no discharges are available for publication this week. Publication of this list will be resumed next week.

ORDERS TO OFFICERS OF THE MEDICAL CORPS, U. S. ARMY

Alabama

To Camp Bowie, Texas, from Camp Sherman, Lieut. J. H. WINN, Huntsville.

To report to the commanding general, Southern Department, from Camp Shelby, Capt. W. W. LONG, Fayette.

California

To Camp Bowie, Texas, from Camp Kearney, Major C. E. SISSON, Norwalk.

To Camp Kearney, Calif., from San Francisco, Col. E. B. FRICK,

To Fort Sheridan, Ill., from Camp Shelby, Lieut. O. P. STOWE, Mill Valley.

To report to the commanding general, American Expeditionary Forces, from Camp Kearney, Lieut.-Col. H. P. CARTER. Western Department, from Camp Dix, Major V. H. HULEN, San Francisco.

To Walter Reed General Hospital, D. C., from San Francisco, Major A. J. CANNING.

District of Columbia

To Biltmore, N. C., from Fort Oglethorpe, Lieut. E. S. GREEN, Washington.

To Fort Jay, N. Y., from Surgeon-General's Office, Col. E. A. DEAN.

To San Francisco, Calif., Letterman General Hospital, from Army Medical School, Lieut. A. L. GUERRA, Washington; from Walter Reed General Hospital, Col. R. REYNOLDS.

Florida

To Baltimore, Md., from Atlanta, Capt. J. F. WILSON, Lakeland.

Georgia

To Camp Bowie, Texas, from Fort Oglethorpe, Capt. W. A. WILLIAMS, Monticello.

To Camp Bragg, N. C., from Camp Dix, Lieut. J. R. TURNER, Temple.

To Camp Zachary Taylor, Ky., from Camp Dix, Lieut. J. M. TRIBBLE, Senoia.

Illinois

To Army Medical School for instruction, from Camp Lee, Lieut. C. B. HERRMANN, Chicago.

To Camp Bowie, Texas, from Camp Custer, Lieut. G. B. MATHISEN, Chicago; from Camp Jackson, Capt. J. K. POLLOCK, Elgin.

To Camp Sherman, Ohio, base hospital, from Camp Shelby, Capt. F. G. MORRILL, Havana.

To Cape May, N. J., from San Francisco, Capt. W. H. GALLAND, Chicago.

To Fort Des Moines, Iowa, from Camp Gordon, Lieut. J. R. SHOLL, Peoria.

To Fort Sheridan, Ill., from Camp Dix, Major C. R. FORRESTER, Chicago.

To Fort Snelling, Minn., from Camp Dix, Capt. H. J. WYCKOFF, Chicago.

To report to the commanding general, Central Department, from Camp Grant, Major W. D. BOER, Chicago.

To St. Louis, Mo., from Camp Grant, Lieut. E. L. DALLWIG, Chicago.

The following order has been revoked: *To Detroit, Mich.,* from Camp Custer, Capt. J. W. CLARK, Chicago.

Indiana

To Camp Bowie, Texas, from Camp Custer, Capt. C. A. UNDERWOOD, Indianapolis.

To Detroit, Mich., from Camp Zachary Taylor, Capt. L. H. REDMAN, Elizabethtown.

To Jefferson Barracks, Mo., from St. Louis, Major G. W. NEWELL, Peru.

To report to the commanding general, Central Department, from Camp Dix, Capt. H. W. NIMAL, Indianapolis.

Iowa

To Camp Bowie, Texas, to examine the command for cardiovascular disease, from Camp Jackson, Lieut. A. C. DAVIS, Iowa City.

To Colonia, N. J., from Fox Hills, Capt. E. J. LAMBERT, Ottumwa.

To Fort Clark, Texas, from Fort Benjamin Harrison, Lieut. C. KAIL, Stratford.

To Hampton, Va., f [illegible] Major L. D. CRUICE.

To report to the [illegible] Central Department, from Camp Dix, Lieut. J. [illegible] GUTHRIE, Rockwell.

Kansas

To Walter Reed General Hospital, D. C., from Fort Riley, Capt. M. R. JOHNSTON.

Kentucky

To Camp Shelby, Miss., base hospital, from Fort Snelling, Lieut. D. B. ROACH, Cadiz.

To Camp Zachary Taylor, Ky., from Camp Dix, Capts. A. L. SOLOMON, Hodgenville; E. L. HENDERSON, Louisville.

To Fort Benjamin Harrison, from Camp Abraham Eustis, Capt. E. MOORMAN, Harned.

To Washington, D. C., Surgeon-General's Office, from Camp Meade, Major C. E. CLAYTON, Dexter.

Maine

To Plattsburg Barracks, N. Y., from Camp Devens, Capt. W. B. MOULTON, Portland.

To report to the commanding general Hawaiian Department, from Fort Riley, Major B. F. HAYDEN, South Portland. Southern Department, from Scituate, Mass., Lieut. W. E. GOULD, Livermore.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Major A. U. DESJARDINS, Waterville.

Maryland

To Boston, Mass., from Fort McHenry, Col. W. A. POWELL.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Lieut. A. W. REIER, Glenarm.

To Whipple Barracks, Ariz., from Fort McHenry, Capt. M. B. LEVIN, Baltimore.

Massachusetts

To Camp Bowie, Texas, from Army Medical School, Lieut. E. J. FITZGIBBON, Boston.

To Camp Shelby, Miss., base hospital, from Camp Devens, Capt. J. A. LYON, Rutland.

To Camp Sherman, Ohio, base hospital, from Camp Jackson, Lieut. J. L. DOWLING, Boston.

To Plattsburg Barracks, N. Y., from Fort Des Moines, Lieut. F. L. FORAN, Worcester; from Lakewood, Lieut. R. C. JONES, Fitchburg.

To report to the commanding general, American Expeditionary Forces, from Boston, Col. J. T. CLARKE. Eastern Department, from Camp Dix, Major E. A. KNOWLES, Medford; Capt. J. F. BOWEN, Amherst. Northeastern Department, from Camp Devens, Lieut. T. W. ELY, Boston; from Camp Dix, Lieut. S. B. ANNIS, Natick.

Michigan

To Camp Bowie, Texas, from Camp Travis, Lieut. L. M. BUSH, Detroit.

To Camp Custer, from Camp Dix, Major R. G. LELAND, Kalamazoo, from Camp Dodge, Major W. N. SALISBURY, Ann Arbor.

To Carlisle, Pa., from Camp Custer, Capt. C. A. BERGE, Ann Arbor.

To Hoboken, N. J., from Camp Custer, Major A. E. LEMON, Detroit.

To Plattsburg Barracks, N. Y., from Fort Des Moines, Lieut. G. H. CAMPAU, Detroit.

Minnesota

To Camp Dodge, Iowa, from Camp Dix, Capt. S. B. MAXEINER, Minneapolis.

To Fort Snelling, Minn., from Camp Dix, Capt. I. F. SELLESETH, Glenwood.

Mississippi

To Camp Pike, Ark., from Camp Dix, Capt. J. C. ARMSTRONG, Water Valley.

To Colonia, N. J., from Fort Oglethorpe, Capt. J. T. HOSEY, Enterprise.

Missouri

To Camp Grant, Ill., base hospital, from Camp Dix, Major D. E. SINGLETON, Clarence.

To Fort Riley, base hospital, from Camp Dix, Major L. H. WINEMILLER, Farley.

Montana

To Fort McHenry, Md., from Baltimore, Lieut J. R. McDOWELL, Intake.

To San Francisco, Calif., Letterman General Hospital, from Camp Kearney, Capt. A. A. HUSSER, Hingham.

Nebraska

To Camp Meade, M.D., from Fort Crockett, Capt. J. M. WOODARD, Aurora.

New Hampshire

To report to the commanding general, Northeastern Department, from Boston, Major J. A. DREW, Rumney.

To Spartanburg, S. C., from Denver, Capt. J. C. THOMPSON, North Stratford.

New Jersey

To Camp Dix, N. J., base hospital, from Hoboken, Capt. J. B. WINTERSTEEN, Moorestown.

To Colonia, N. J., from Lakewood, Lieut. J. J. BURNE, Newark.

To Fort Monroe, Va., from Lakewood, Col. C. F. MASON.

To report to the commanding general, American Expeditionary Forces, from Lakewood, Major C. H. GODDARD.

To San Francisco, Calif., from Hoboken, Col. G. L. EDIE.

To Walter Reed General Hospital, D. C., from Camp Dix, Cols. A. S. BOWEN, R. E. GOLDTHWAITE, R. REYNOLDS, G. V. RUKKE, Majors P. E. McNABB, H. E. WEBB, Capt. E. B. SPAETH; from Hoboken, Col. R. M. THORNBURGH.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Col. E. A. DEAN.

New Mexico

To Whipple Barracks, Ariz., from Camp Kearney, Major H. B. KAUFFMANN, Albuquerque.

New York

To Camp Bowie, Texas, from Camp Shelby, Lieut. E. E. VAN DERWERKER, New York; from Camp Travis, Lieut. E. CALVELLI, New York.

To Camp Dix, N. J., to examine the command for cardiovascular disease, from Camp Meade, Lieut. D. SCHULTHEIS, New York.

To Camp Dodge, Iowa, from Fort Des Moines, Lieut. L. HAUSMAN, New York.

To Carlisle, Pa., from Detroit, Capt. H. A. GRIFFIN, New York.

To Fort Hamilton, N. Y., from Fort Schuyler, Major S. S. PIPER, Elmira.

To Fort Porter, N. Y., from Plattsburg Barracks, Capt. G. C. FISK, Buffalo.

To Fort Riley, base hospital, from Camp Dodge, Major H. A. DURHAM, New York.

To Fort Schuyler, N. Y., from Camp Dix, Major D. B. BRINSMADE, New York.

To Hampton, Va., from Camp Dix, Capt. E. N. BOUDREAU, Auburn; from Fort Oglethorpe, Capt. J. J. HARRINGTON, New York.

To Hoboken, N. J., from Camp Dix, Lieut. J. F. X. LOORAM, Brooklyn.

To Otisville, N. Y., from Oteen, Lieut. H. J. SEIFF, New York.

To Plattsburg Barracks, N. Y., from Hoboken, Major J. H. CARROLL, New York; from Lakewood, Lieut. B. J. SLATER, Rochester; from Walter Reed General Hospital, Lieut. J. HARKAVY, New York.

To report to the commanding general, Eastern Department, from Fort Sam Houston, Major L. M. SIMONSON, Pelham.

To San Francisco, Calif., Letterman General Hospital, from Camp Dix, Capt. O. E. UTZINGER, Ithaca.

To Spartanburg, S. C., from Camp Jackson, Lieut. C. M. MANN, Petersburg; from Camp Meade, Lieut. M. A. McIVER, New York.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Major J. R. OLIVER, New York.

The following order has been revoked: *To Spartanburg, S. C.*, from Plattsburg Barracks, Capt. W. A. SHAW.

North Carolina

To report to the commanding general, Southern Department, from Camp Sevier, Lieut. R. S. McGEACHY, Raleigh.

To Spartanburg, S. C., from Camp Devens, Lieut. J. E. COCKE, Asheville.

North Dakota

To Fort Snelling, Minn., from Fort McHenry, Lieut. R. L. GHERING, Larimore.

Ohio

To Camp Bowie, Texas, from Camp Sherman, Lieut. A. A. BRINDLEY, Port Clinton.

To Camp Kearney, Calif., from Toledo, Lieut.-Col. G. H. McLELLAN.

To Fort Sheridan, Ill., from Camp Dix, Capt. J. C. GEORGE, Dayton; from Camp Grant, Lieut. M. H. SHIPLEY, Cleveland.

To Oteen, N. C., from Camp Custer, Capt. H. H. WARD, Cleveland.

To report to the commanding general, Central Department, from Camp Dix, Lieut. J. L. BEACH, Seville.

To Washington, D. C., from Camp Dix, Major N. P. McGAY, Cleveland.

Oklahoma

To Army Medical School for instruction, from Fort Des Moines, Lieut. J. E. HEATLEY, Carmen.

To Fox Hills, N. Y., from Camp Pike, Capt. W. W. WOODY, Tulsa.

Pennsylvania

To Camp Bowie, Texas, from Camp Sherman, Lieut. J. C. FULMER, Williamsport.

To Camp Meade, Md., from Army Medical School, Capt. W. F. BEITSCH, New Brighton.

To Camp Sherman, Ohio, from Camp Dix, Capt. M. S. BOWERS, Braddock.

To Fort Sam Houston, Texas, base hospital, from Camp Sherman, Capt. I. L. OHLMAN, Pittsburgh.

To Fort Totten, N. Y., from Camp Dix, Major N. D. SMITH, Rutledge.

To Fort Washington, Md., from Camp Dix, Capt. R. E. THOMAS, Scranton.

To Philadelphia, Pa., from Surgeon-General's Office, Major W. WALKER, Philadelphia.

To Pittsburgh, Pa., from Camp Dix, Capt. J. H. ALEXANDER, Pittsburgh; from Lakewood, Capt. W. P. HUGHES, Pittsburgh.

To report to the commanding general, Northeastern Department, from Camp Dix, Capts. R. S. K. HANIGAN, East Prospect; C. J. WATSON, Philadelphia; from Fort Oglethorpe, Lieut. W. L. COLEMAN, Easton.

Rhode Island

To Key West Barracks, Fla., from Camp Zachary Taylor, Capt. R. S. WILCOX, Providence.

South Carolina

To Fort Riley, base hospital, from Fort Des Moines, Major G. G. COTTAM, Sioux Falls.

To Spartanburg, S. C., from Camp Jackson, Major E. C. MAJOR, Latta.

Texas

To Camp Bowie, Texas, to examine the command for cardiovascular disease, from Camp Meade, Lieut. E. TOOMIN, Waco.

To Denver, Colo., from Fort Sam Houston, Capt. L. L. HEWLETT, Lockhart.

To Fort Bayard, N. M., from Camp Bowie, Lieut. C. H. BROOKS, Waco.

To Fort Worth, Texas, from Camp Dix, Lieut. F. H. NEWTON, Dallas.

To Fox Hills, N. Y., from Camp Dix, Major C. C. CODY, Jr., Houston.

To report to the commanding general, Southern Department, from Camp Dix, Capt. J. C. McKEAN, Lometa; from Fort Oglethorpe, Lieut. W. N. LIPSCOMB, Crockett.

Virginia

To Camp Meade, Md., from Carlisle, Major P. C. RILEY, Markham.

To Denver, Colo., from Newport News, Col. H. H. JOHNSON.

To Fort Leavenworth, Kan., from Newport News, Col. M. A. W. SHOCKLEY.

To Fort Riley, base hospital, from Camp Dodge, Capt. C. M. EDWARDS, Richmond.

To Plattsburg Barracks, N. Y., from Camp Dix, Capt. S. T. NOLAND, Leesburg; from Camp Meade, Lieut. R. A. MOORE, Phenix.

West Virginia

To Camp Zachary Taylor, Ky., from Camp Dix, Capt. W. B. ROBERTSON, Quincy.

Wisconsin

To Camp Bowie, Texas, from Camp Sherman, Capt. J. W. LOCKHART, Oshkosh; Lieut. E. A. GATTERDAM, Wauwatosa.

To Oteen, N. C., from Biltmore, Capt. A. O. SANDERS, Superior.

Wyoming

To San Francisco, Calif., Letterman General Hospital, from Fort Rosecrans, Capt. O. K. SNYDER, Cheyenne.

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest: such as relate to society activities, new hospitals, education, public health, etc.)

CALIFORNIA

Personal.—Charles A. Robinson, formerly attending physician at the California State Reform School for Boys, has been appointed health officer for Madera city and county.

Anesthetists Organize.—May 6, the anesthetists of southern California organized a society to be known as the Southern California Society of Anesthetists, whose objects are primarily scientific, and secondarily the securing of such state legislation as shall debar the "anesthetic technician" from a legitimate medical field. Dr. Frank D. Bullard, Los Angeles, was elected president, and Dr. Eleanor C. Seymour, Los Angeles, secretary-treasurer.

ILLINOIS

Hospital News.—An addition to the Lutheran Hospital, Moline, is to be built this summer at a cost of $65,000. With this addition the institution will have a capacity of 125 beds. ——The city council of Belvidere has appropriated $2,000 toward the new hospital to be erected in that city.

Personal.—Bellenden S. Hutcheson, Mound City, Capt., M. C., U. S. Army, who has been on duty in France and who won the Victoria Cross and British Military Cross, arrived home, June 6.——Dr. John C. Ellis, Decatur, is said to have pleaded guilty to a charge of violation of the Harrison Narcotic Law and to have been fined $300 and costs, June 3.——A suit for damages for $25,000 has been filed against Drs. Robert L. French and William L. Ruggles, Oak Park, by Capt. Harry B. Todd, Oak Park.

Chicago

Illegal Practitioner Arrested.—William James, 2938 South Dearborn Street, was arrested by the Department of Registration and Education of the State of Illinois for practicing medicine without a license. James was found guilty, but on account of his advanced years, he was placed on parole for one year.

Rush Alumni Elect Officers.—At the annual meeting of the Alumni Association of Rush Medical College the following officers were elected: president, Dean D. Lewis, Col., M. C., U. S. Army; secretary, Dr. Charles A. Parker; treasurer, Dr. Elmer L. Kenyon; directors for three years, Drs. George H. Coleman and B. McPherson Linnell.

Establishment of John M. Dodson Lecture.—At the annual meeting of the Alumni Association of Rush Medical College, held in Chicago, June 6, Dr. John M. Dodson was presented with a gold watch as an appreciation of his thirty years of service to the college. The Alumni Association also established the John M. Dodson Lecture to be delivered in connection with the work of the Rush Postgraduate School of Medicine of the University of Chicago. The lecture is to be on medical education, history or on any other subject relative to the advance of medical science. The choice of lecturer and subject is vested in a self-perpetuating committee consisting of Dr. Ludvig Hektoen, chairman, Drs. George H. Coleman, Morris Fishbein, Elmer L. Kenyon and John E. Rhodes. The presentation address and the announcement of the lecture fund were made by Dr. Arthur Dean Bevan.

Hospital News.—Taylor E. Darby, Lieut.-Col., M. C., U. S. Army, in command of U. S. Army General Hospital No. 32, has received orders to vacate the building, June 15, and evacuate the soldiers now quartered there to U. S. Army General Hospital No. 28, Fort Sheridan, Ill.——Plans have been announced for a maternity hospital to be established at Forty-Seventh Street and California Avenue, to be called the Misericordia Hospital, and to cost $100,000.——Plans for the resumption of the preliminary work for the new medical college and hospital buildings for the University of Chicago have again been taken up. The new medical school will be constructed on the property owned by the university on the south side of the midway, and the first building to be erected will be a hospital and dispensary to cost $1,000,000. The school for practitioners will be located near Rush Medical College, and the hospital will be known as the Albert Merritt Billings Hospital. The buildings planned will cost $17,000,000.

INDIANA

Antituberculosis Association Organized.—The League of Tuberculosis Associations of the Thirteenth District of Indiana, affiliated with the state and national organizations, was organized at Plymouth, May 22. Mr. James Wilkinson, Goshen, was elected chairman; Mrs. Ethel M. Cook, Plymouth, secretary, and Mrs. William B. Siders, Warsaw, treasurer.

Personal.—Henry O. Brueggeman, Lieut.-Col., M. C., U. S. Army, Fort Wayne, who since his return from France has been on duty at Fort McHenry, Md., will soon be released from service.——Dr. Lester I. Ofner, superintendent of the Irene Byron Tuberculosis Hospital on the Allen County Farm, Fort Wayne, has resigned on account of ill health.——Dr. Richard B. Wetherill, Lafayette, announces his retirement, June 1, after thirty-six years of practice of medicine in Lafayette.——Dr. George H. Hoskins, Whiting, has been elected president and Dr. H. E. Graham, Gary, secretary, of the Lake County Anti-Tuberculosis Society.——Dr. Hugh T. Montgomery, South Bend, the oldest living charter member of the St. Joseph County Medical Association, was the guest of honor at the thirty-second anniversary meeting of the organization, May 14.

Venereal Clinics.—The city council of Kokomo has appropriated $1,500 for the establishment and maintenance of a free clinic for the treatment of venereal diseases, and it said that the city council has also enacted an ordinance requiring physicians to report for quarantine or treatment all cases submitted to them.——The city council of Madison has made an appropriation for the beginning of the work against venereal disease in that city.——A free venereal clinic was opened, May 3, at Anderson in charge of Ed C. Davis, Indianapolis.——The Terre Haute Public Health Clinic is in active operation under the charge of Dr. Maurice B. Van Cleave.——A free venereal disease clinic has been organized for Allen County at Fort Wayne in charge of Dr. Gaylard M. Leslie.——A venereal disease clinic for South Bend was opened, June 1, under the charge of M. R. Birmingham, Indianapolis.

IOWA

Personal.—Dr. David O. King, Eldora, has been appointed local surgeon of the Northwestern system.——Dr. George B. Thompson, Winthrop, is reported to be critically ill.——Dr. Walter W. Daut has been elected health physician of Muscatine.——Dr. Sara E. Foulks, Davenport, is now in Serbia with the Balkan mission of the American Red Cross.——Frederick H. Roost, Major, M. C., U. S. Army, Sioux City, has been commissioned lieutenant-colonel, and is now stationed in Luxembourg.——Dr. Charles E. Ruth, Des Moines, who for six months has been commanding officer of the hospital at Fort William McKinley, Manila, P. I., returned home, May 5.

KENTUCKY

State Health Board Moves to Louisville.—The headquarters of the Kentucky State Board of Health, which have been at Bowling Green since 1883, were moved to Louisville, May 1. The new location is in the old Union National Bank Building at Sixth and Main streets.

Sanatorium at Dawson Springs.—Work has been started on the Federal Hospital at Dawson Springs where 5,000 acres in Hopkins and Christian counties have been deeded for this purpose. It is expected that between $12,000,000 and $15,000,000 will eventually be expended on this institution, which will include an administration building, tuberculosis sanatorium, hospital for nervous diseases, general hospital, and building for vocational training.

Personal.—Dr. William E. Gary, head of the milk and food division of the Louisville Health Department, has resigned to accept a position as head of the roentgen-ray and pathologic department of the Jennie Stuart Memorial Hospital, Hopkinsville.——Sidney J. Meyers, Lieut.-Col., M. C., U. S. Army, Louisville, has returned after eight months of service in France, where he was in command of Base Hospital No. 238, Rimancourt.——Dr. Joseph E. Wells, Cynthiana, has been appointed a member of the state board of health.

MARYLAND

Correction.—Capt. Raymond R. Decker, commanding U. S. Army General Hospital No. 7, Roland Park, Baltimore, writes that the Baltimore correspondence appearing in the May 17 issue of The Journal to the effect that the hospital "recently reverted from military to Red Cross control" is incorrect. The Red Cross will conduct a school for the reeducation of war blinded soldiers, sailors and marines, using the temporary buildings on the military reservation heretofore known as U. S. Army General Hospital No. 7, but will have no control over, or affiliation with, that institution. The blind men will be discharged from military service and will attend the school as civilians, or rather as wards of the Federal Board for Vocational Education, which will have as its representative a supervisor of the blind, stationed at the school. The reservation and all property remains under government control and will be guarded and policed by detachments of soldiers after the demobilization of the hospital is completed.

Personal.—Dr. William H. Welch has returned to Baltimore, after spending several months as one of the representatives of the United States at the international convention of the Red Cross, held at Cannes, France.——After serving as professor of gynecology at the Johns Hopkins Hospital for thirty years, Dr. Howard A. Kelly, Baltimore, has resigned. He will be succeeded by Dr. Thomas S. Cullen, who has been assistant professor of gynecology at the Johns Hopkins Hospital for a number of years. Dr. Kelly gave as his reasons for taking this step that he had held the position long enough and that he would be free to give more attention to his profession along other lines, as well as to his other activities.——Dr. Frank C. Marino, Baltimore, who served with the Medical Corps in France and was in front-line hospitals at Château Thierry, St. Mihiel and Verdun, has been appointed medical superintendent of St. Joseph's Hospital, Baltimore.——Andrew C. Gillis, Lieut.-Col., M. C., U. S. Army, former superintendent of Mercy Hospital, Baltimore, who was in charge of a group of hospitals in the Toul sector, has returned from overseas and is now at his home in Baltimore.——Dr. Arthur Wegefarth, Baltimore, has been confined to his home with a severe attack of tonsillitis, followed by mumps.

MASSACHUSETTS

Harvard Alumni Meeting.—The annual meeting of the Harvard Medical Alumni Association will be held in Harvard Hall, Cambridge, on Commencement Day, June 19, at 12:30 p. m.

Personal.—Dr. Joseph P. Mulhern, Boston, has been appointed resident physician of the Long Island Hospital.——Dr. Clement C. Nevin, Edgartown, has been appointed associate medical examiner (coroner) for Dukes County, succeeding Dr. Orland S. Mayhew, Tisbury.

State Society Elects Officers.—The Massachusetts Medical Society held its one hundred and thirty-eighth annual meeting in Boston, June 3 and 4, under the presidency of Dr. Samuel B. Woodward, Worcester, and the following officers were elected: president, Dr. Alfred Worcester, Waltham; vice-president, Dr. Arthur R. Crandell, Taunton; secretary, Dr. Walter L. Burrage, Jamaica Plains (reelected); treasurer, Dr. Arthur K. Stone, Framingham Center; librarian, Dr. Edwin H. Brigham, Brookline, and orator, Dr. Hugh Cabot, Boston.

MICHIGAN

Nurses Memorial Home.—James Couzens, mayor of Detroit, announces that he will present the city with a nurses' home in memory of the Detroit nurses who served during the world war. The building will be six stories in height, 114 by 147 feet, and will cost $300,000.

Health Officers Organize.—The Michigan chapter of the American Public Health Association was organized at the annual convention of the Michigan State Medical Society, and the following officers were elected: chairman, Dr. Richard M. Olin, Lansing, state health commissioner; secretary-treasurer, Dr. Victor C. Vaughan, Ann Arbor. A board of directors was appointed by Dr. Richard M. Olin, state health commissioner and chairman of the board, as follows: Drs. Guy L. Kiefer, Detroit; William De Kleine, Flint; Neagle, Jackson; Clyde C. Slemons, Grand Rapids; Alvin H. Rockwell, Kalamazoo; Charles P. Drury, Marquette; Joseph J. Gerkins, Ironwood; Charles A. Neafle, Pontiac; Eugene Miller, Battle Creek; William G. Wright, Lansing; Arthur F. Fischer, Hancock, and George A. Holliday, Traverse City; Mrs. Lystra E. Gretter and Paul Rachel, Detroit; Profs. W. C. Hoad and Warren E. Forsythe, Ann Arbor; Mr. Shoecraft, city engineer of Flint, and W. S. Spery, Grand Rapids.

MISSOURI

Personal.—Dr. Thomas B. M. Craig, Nevada, has been appointed superintendent of the State Hospital No. 3, Nevada, succeeding Dr. William P. Bradley, resigned.—— Dr. Joseph R. Hamer, Cameron, has been oppointed coroner for Clinton County.

State Association Meeting.—The Missouri State Medical Association held its sixty-second annual meeting at Excel- sior Springs, May 26 to 28, with an attendance of 434. The following officers were elected: president, Dr. Nimrod P. Wood, Independence; vice presidents, Drs. John J. Gaines, Excelsior Springs; Edwin F. Yancey, Sedalia; William A. Clark, Jefferson City; Arthur M. Gregg, Joplin, and J. Curtis Lyter, St. Louis; secretary, Edward J. Goodwin, St. Louis (reelected); treasurer, J. Franklin Welch, Salisbury; and councilors: fifteenth district, Linn J. Schofield, Warrensburg; twenty-second district, Henry L. Reid, Charleston; twenty- sixth district, William H. Breuer, St. James; twenty-seventh district, James C. B. Davis, Willow Springs; twenty- eighth district, Arthur L. Anderson, Springfield, and twenty- ninth district, Robert L. Wills, Neosho. The next meeting will be held at Jefferson City.

NEBRASKA

Personal.—Dr. Moth has been elected city physician of Omaha, succeeding Dr. Harry D. Kelly, resigned.——Alvah Sherman Pinto, Major, M. C., U. S. Army, Omaha, command- ing Base Hospital No. 48, Recey, France, has been made lieutenant-colonel, Medical Corps.

Medical School Now Registered.—A letter from the dean of the University of Nebraska College of Medicine states that that college was admitted to the list of registered institutions by the board of regents of the University of the State of New York at a meeting, held May 29.

Physicians' Building in Omaha.—The Medical Building Association has been incorporated in Omaha with a capital of $1,500,000 with the object of building and operating a twenty-story building at Seventeenth and Dodge streets, Omaha. The officers of the association are: Dr. William P. Wherry, president; Dr. W. H. Sherraden, vice president; Dr. Ernest W. Powell, secretary, and Mr. Leonard W. Scheibel, treasurer.

NEW YORK

Personal.—Dr. Frederick D. Keppel, third assistant secretary of war and former dean of Columbia University, will become director of the foreign operations of the American Red Cross, July 1.

New York City

Columbia University.—At the commencement of Columbia University, June 5, the degree of Doctor of Medicine was conferred on 138 graduates. The biennial Cartwright prize of the School of Medicine, of $500, was awarded to Dr. Abraham Leon Garbat of New York City.

Alumni Elect Officers.—At the annual meeting of the Society of the Alumni of City (Charity) Hospital, held May 21, the following officers were elected: president, Dr. Charles Ogilvy; vice president, Dr. Walter Seymour Reynolds; secretary, Dr. Wm. M. Patterson, and treasurer, Dr. Perry Bartlette Hough, all of New York City.

Memorial Hospitals to Be Established.—In memory of 120 men from the fourth ward of Brooklyn, who lost their lives in the war, a campaign is being planned to raise a fund of $500,000 to be equally divided between the Jamaica Hospital and St. Mary's Hospital to be used for the erection of much needed additions to these institutions. The extension is to be decorated as a memorial to the soldiers of the fourth ward.

Personal.—Dr. Alexandra Acha, Peruvian delegate to the American Medical Association, and Dr. Cary Eggleston of New York, while on their way to West Point, a trip which was a part of the entertainment of foreign delegates to the meeting of the American Medical Association, were the victims of an automobile accident. They were taken to the hospital at Tuxedo. Fortunately neither of them sustained serious injuries.

Plan to Make Brooklyn Medical Center.—A number of the leading physicians of Brooklyn met at the Hamilton Club, June 2, to discuss the possibilities of developing Brooklyn's resources as a teaching center. The meeting was presided over by Dr. Glentworth R. Butler. Others interested in the project are Drs. H. Beeckman Delatour, Brooklyn, John A. Lee, Otto V. Huffman, Lewis S. Pilcher, Joshua M. Van Cott, Edwin H. Fiske, William Browning, William B. Brinsmade and Jacob Fuhs.

Columbia University Plans New System of Physical Education.—Under the direction of Dean Herbert E. Hawkes, Dr. W. H. Castline, and Dr. George L. Meylan a new system of physical education for the development of the health and physical condition of college students has been perfected and will be begun at the opening of the fall term. Medical sur- veillance will be extended to the student from the day he enters college until he receives his diploma. When physical defects appear they will be corrected, with the purpose of turning out 100 per cent. men physically as well as mentally. Plans have also been made for caring for students who show conditions of malnutrition, underweight, etc. The university restaurant has been placed under the direction of Prof. Charles T. MacFarline and students will be supplied with good food properly balanced and special diets will be fur- nished. In order to carry out these plans the university plans to maintain on the campus a staff of physicians and nurses.

PENNSYLVANIA

Personal.—Dr. James F. Edwards, for many years director of the department of health at Pittsburgh, has been appointed health commissioner of Omaha.——Dr. Andrew R. Cancel- liere, Pittsburgh, who suffered a fracture of the skull in an automobile accident, May 18, is reported to be improving. ——Dr. Walter A. Dearth, Pittsburgh, has been elected a member of the Allegheny County Prison Board.

Dixon Memorial.—A bronze tablet, in memory of the late Dr. Samuel G. Dixon, state commissioner of health from the creation of the department of health until his death last year, was unveiled at the State Tuberculosis Sanitarium at Ham- burg, Berks County, June 6. The tablet was presented by the patients at the institution as a memorial to the official who took such an interest in their welfare and was affixed to a large boulder in the ground.

Philadelphia

Medical Society Reception.—The Medical Club of Phila- delphia held its last reception of the season at the Bellevue- Stratford Hotel, June 18. The Honorable Robert L. Owen, United States senator from Oklahoma, and the foreign dele- gates of the American Medical Association were the guests of honor.

Babies' Hospital.—The building for the Babies' Hospital of Philadelphia, which was planned previous to the war, will now be built as planned at the Northeast Corner of Seventh and Delancey Streets and will cost $110,000. The building will be on a lot 40 x 81 feet, and will be six stories in height and of colonial type.

Commencement at Jefferson.—At the ninety-fourth annual commencement exercises at Jefferson Medical College, June 7, a class of 142 was graduated. The degree of doctor of laws was conferred on Major-Gen. Merritte W. Ireland, Surgeon-General, U. S. Army, and Vice-Admiral Grieve. General Ireland, in his address, lauded the company of soldiers who submitted themselves as volunteers for experiments with disease-bearing lice to determine the cause of trench fever.

Personal.—Lieut.-Col. Clarence P. Franklin, M. C., U. S. Army, was the guest of honor at a banquet at the Hotel Walton, given June 5, by prominent members of the Italian Colony of this city.——Daniel M. Hoyt, Lieut.-Col., M. C., U. S. Army, commander of Base Hospital No. 55, has returned to Camp Merritt, N. J., where he is awaiting demobilization.——At the annual meeting of the Philadelphia Laryngological Society, June 3, Dr. J. Solis-Cohen was elected honorary president for the term of his life.

SOUTH DAKOTA

New State Officers.—At the thirty-eighth annual meeting of the South Dakota State Medical Association held in Watertown, May 20 to 22, under the presidency of Dr. Daniel L. Scanlan, Volga, Sioux Falls was selected as the place of meeting for 1920 and the following officers were elected: president, Dr. Robert D. Alway, Aberdeen; vice presidents, Drs. Harry T. Kenney, Pierre, and George S. Adams, Yankton, and secretary-treasurer, Dr. Frederick A. Spafford, Flandreau.

VERMONT

Board of Health in New Quarters.—The state board of health has moved to its new home at 2 Colchester Avenue. The building contains twenty-two rooms and has special quarters for officers of the board and state laboratory.

Personal.—Dr. Edgar O. Crossman, medical superintendent of the Lakeview Sanatorium, Burlington, has opened an office in Manchester, N. H.——Dr. Charlotte Fairbanks, St. Johnsbury, has been made a "Citizen of France," and has received from the mayor of Luzancy a gold medal in appreciation of her services as surgeon in the medical unit of the American Women's Hospital in France.

WEST VIRGINIA

State Society Meeting.—At the fifty-second annual meeting of the West Virginia State Medical Association held in Clarksburg, May 20 to 22, under the presidency of Dr. Robert J. Reed, Wheeling, Parkersburg was selected as the next place of meeting, and the following officers were elected: president, Dr. Henry R. Johnson, Fairmont; vice presidents, Drs. Benjamin F. Shuttleworth, Clarksburg, Walter E. Vest, Huntington, and Joseph L. Miller, Thomas; secretary, Dr. J. Howard Anderson, Marytown (reelected); treasurer, Dr. Hugh G. Nicholson, Charleston (reelected); delegate to the American Medical Association, Dr. Henri P. Linsz, Wheeling, and alternate, Dr. John E. Cannaday, Charleston.

WISCONSIN

Morphin Addict Robs Physician's Offices.—We are informed by Dr. Oscar N. Mortensen of Grand Rapids, that, June 4, a morphin habitué broke into his office and took some Liberty Bonds. He had called at the office and asked for drugs. The man is described as a typical drug addict—sallow, with several large sores on the face, dark hair, about 30 years old and about 5 feet, 10 inches tall.

New Hospitals.—A third Catholic hospital is to be established in Superior by the Sisters of St. Joseph who have acquired as a site the William Patterson Home on Bay Street. ——The new medical buildings on the campus of the University of Wisconsin, Madison, are to be known as the Bradley Memorial Hospital and University Infirmary. They will be ready for occupancy by July 1.——A central city dispensary is to be established at De Pere in the Parmentier Building.

CANADA

Personal.—Lieut.-Col. F. McKelvey Bell, Ottawa, Ont., director of medical services for the Canadian Department of Soldiers' Civil Reestablishment, has resigned. He states in his letter of resignation that the medical branch of this department has been made secondary in importance to almost every other branch in the organization, and that many important recommendations he made have never been acceded to. Lieutenant-Colonel Bell was in charge of the medical services at Halifax at the time disaster overwhelmed that city. ——Dr. Edwin G. Hodgson, Toronto, has returned from overseas.——Prof. Alexander McPhedran, Toronto, and Principal Hibben of Princeton University, were given the honorary degree of doctor of laws at the recent convocation of the University of Toronto. Among others who received honorary degrees were: Robert Russell Bensley, Chicago (doctor of science), and Frank Rattray Lille of the University of Chicago.

University News.—Announcement has been made of the following bequests to the University of Toronto: $50,000 by the will of the late Dr. Julius Mickle, London, England, a former graduate of the university. This amount to be divided into two fellowships, one in honor of the father of the donor and the other to honor the mother. The former is to consist of the proceeds of $25,000 and is to be awarded to the person who, during the preceding ten years, had done most to promote the sound practice of medicine, and this will be open to all the world. The other fellowship will be awarded to the student of the University of Toronto who passes highest in his or her third and fourth years.——An unnamed donor has given the University of Toronto $10,000 through Mrs. McCrae Kilgour, Brandon, Man., to perpetuate the memory of her brother, the late Col. John McCrae, who was an alumnus of the university. This will be used for two scholarships to be given alternate years to students from Guelph Collegiate Institute; failing one, then from any other institute in Canada.——The residue of the estate of the late Dr. Richard A. Reeve, Toronto, goes to the University of Toronto, but the amount is not definitely known as yet.—— The president of the University of Toronto has asked all members of the clinical medical department to place their resignations in the hands of the newly appointed professor of medicine, Dr. Duncan A. L. Graham. It is understood there are to be a number of changes. Dr. Graham will strive to bring about the more intimate correlation of laboratory and clinical methods for diagnosis and treatment of disease. It is likely that each ward of the general hospital will have a small laboratory in charge of a pathologist.

LATIN AMERICA

Deaths in the Profession.—Dr. **Miguel Ochoa** of Buenos Aires, where he had a private medical clinic in addition to his work in the public hospitals.——Dr. **Romualdo Ibañez,** formerly of the editorial staff of the *Crónica Médica* of Lima, Peru.

Inauguration of Radium Institute at Rio de Janeiro.—The Instituto de Radiologia da Faculdade de Medicina was recently inaugurated with much ceremony, Prof. Aloysio de Castro presiding. The radium treatment department is in charge of Profs. F. Terra and E. Rabello, while the roentgen department continues in charge of the chiefs for many years, of roentgen work, Drs. R. Duque Estrada and A. Machado. There are provisions for free and paying patients, and arrangements can be made also for radium treatment in the home.

Public Health Training in Brazil.—Following the report of a special commission sent to Brazil in 1916 to study medical conditions, the Rockefeller Foundation International Health Board entered into an arrangement with the Faculdade de Medicina e Cirurgia at São Paulo for the establishment of a department of hygiene in that institution. The new department—the first of its kind in Brazil—is to be maintained jointly by the medical school and the board for a period of five years, with the understanding that, if at the end of that time it has justified itself, the government will assume its support.

Improved Public Health Service in Brazil.—The agitation for measures to reduce the spread of various diseases throughout Brazil has resulted in the formulation of a set of regulations which are published in the *Brazil-Medico* of April 12. The diseases principally in view are hookworm, malaria and Chagas' disease or Brazilian trypanosomiasis. The service for leprosy is to be separate from the others. The plan outlined is most excellent, but our exchange says it is like a fine body without any head, as the whole functioning of the service is in the hands of the Ministerio da Justicae Negocios Interiores which is already overburdened with its specific duties. The plan provides for cooperation between the national and the state and local service, which share the expense in specified proportions.

Brazilian Neurologists Elect Officers.—At its meeting, March 27, the Brazilian Society of Neurology and Psychiatry elected the following officers: president, Prof. Dr. Juliano Moreira; vice president, Prof. Dr. Aloysio de Castro; general secretary, Dr. Mario Pinheiro; first secretary, Dr. W. de Almeida; second secretaries, Drs. H. Carrilho, Teixeira Mendes, Ant. Costa; treasurer, Dr. U. Vianna; commission on neurology, Profs. Miguel Couto, A. Austregesilo, Oswaldo de Oliveira, Miguel Osorio, Fernandes Figueira and Ernani Lopes; commision on psychiatry, Profs. H. Roxo and Franco da Rocha, and Drs. Rodrigues Caldas, G. Riedel, W. Schiller and P. Pernambuco; commission on legal medicine, Profs. Nascimento Silva, A. Peixoto, Tanner de Abreu, Oscar Freire and Diogenes Sampaio, and Dr. M. Barbosa.

Resignation of Centeno.—Under the heading "Lamentable News," the *Archivos Españoles de Pediatría* publishes a notice that Professor Centeno has resigned the chair of pediatrics at the University of Buenos Aires. The resignation is based on purely personal reasons, it is said. Under another heading it mentions that seven physicians are now competing for the post, including such well known names as Araoz Alfaro, Elizalde, Sixto, Acuña, Navarro and Santas. On account of the retirement of Dr. Centeno from the charge of the children's ward at the Hospital de Clinicas at Buenos Aires, his pupils are planning a testimonial to him to take the form of a handsomely bound collection of the scientific works of all his pupils and collaborators. The collection will form fourteen volumes of 800 pages each, and contain many important works such as Elizalde's monograph on splenomegaly in children; on tumors in the kidneys, by Lugones; on the treatment of gallstone disturbances, by Jorge, Jr.; F. Schweizer's contributions on infant feeding and nutrition, and Navarro's important work on glandular disease in children. The *Semana Médica* comments on this testimonial to Professor Centeno: "'By their fruits ye shall know them.' The gift of this collection will enable Dr. Centeno to realize at a glance the magnitude of his work in the chair of pediatrics. Would that other professors could have as rich a collection of important works to show, and such a pleiad of stars to surround them."

GENERAL

National Board Examination.—The examination held by the National Board of Medical Examiners at Philadelphia, June 2 to 7, had fifty-two candidates, the largest number in the history of that board.

The Campaign Against Tuberculosis.—The U. S. Public Health Service has published a leaflet, one of its "Keep Well Series," entitled "How to Avoid Tuberculosis." It gives the symptoms briefly and simply, and outlines the proper method of living, which, if followed, would not only go far to prevent tuberculosis but many other human ailments.

Antivivisection Legislation Proposed.—Senator Myers of Montana would prohibit experiments on living dogs in a bill just introduced in the Senate. The bill makes it a misdemeanor to experiment or operate in any manner on a dog for any purpose other than to cure or heal it. The law, because of constitutional limitations, would apply only to the District of Columbia, territories and insular possessions. It was referred to the committe of the judiciary.

Bill to Reinstate Officers of Public Health Service.—All physicians who left the Public Health Service to enter the army or navy for the period of the war must be reinstated on application, under the terms of a bill by Senator Jones of Washington. The bill also provides that they be given the same seniority in rank to which they would have been entitled had they not resigned. The bill was referred to the Senate Committee on Public Health and Quarantine of which Senator France of Maryland is chairman.

Amendment to Food and Drug Act Urged.—Congressman Burton L. French of Idaho would amend the pure food and drug act in the misbranding of drugs. He has introduced an amendment to the pure food and drug act providing that every package sent in interstate commerce containing a virulent poison shall be placed in a container bearing the word "poison" printed in red on white, or in white on red, and giving at least one suitable antidote. In the case of liquid poisons, the use of a colored glass roughened bottle is made mandatory.

Legislation Against Venereal Treatment Advertisements.—The transmission through the mails of advertisements relating to the treatment of venereal diseases and sexual disorders is prohibited by a measure introduced by Senator Townsend of Michigan. The publication of all matter relating to sexual cures is made nonmailable matter, except in instances of didactic or scientific treatises which do not call attention to any person from whom treatment or advice may be obtained. The publications of the Public Health Service are also excepted. Violation is to be punished by a fine of $5,000 or five years imprisonment, or both. The bill was referred to the Senate Committee on Postoffices.

Bequests and Donations.—The following bequests and donations have recently been announced:

University of Toronto, Ont., a gift of $25,000 a year for 25 years to provide for a full-time clinician in the department of medicine and a half-time physician in pediatrics by Sir John and Lady Eaton.

Washington University School of Medicine, a donation of $150,000 by the general education board on condition that an equal amount be raised by subscription, this fund to be used for the endowment of a department of pharmacology.

St. Joseph's Hospital, Philadelphia, $1,000 by the will of Marcella Ennis.

Pennsylvania Hospital, Philadelphia, $10,000 by the will of Robert Ralston Stewart.

For a hospital in DeKalb, Ill., $22,000 by the will of Joseph F. Blidden, DeKalb.

Jewish Charities, Chicago, and Michael Reese Hospital each $18,500 by the will of Gustave Freund.

Annual Conference of Health Officers.—The seventeenth annual conference of State and Territorial Health Authorities with the Public Health Service was held at Washington, D. C., June 4 and 5. Surg.-Gen. Rupert Blue presided. The subjects which were taken up at the conference were malaria, child hygiene, problems in interstate health work, control of venereal diseases, public health education, Sanitary Reserve Corps, railroad sanitation, and statistics relating to the 1920 census. Dr. William H. Welch, Baltimore, who represented the Public Health Service at the recent conference of Red Cross societies held at Cannes, France, made a report on the organization of a league of Red Cross societies, for the purpose of promoting public health throughout the world.

One of the most important questions taken up by the conference was that of malaria, most of the discussion dealing with the work accomplished by the Public Health Service, in connection with the sanitation of extracantonment zones.

Asst. Surg.-Gen. Taliaferro Clark, Washington, D. C., discussed the necessity for a nationwide program of child hygiene to be carried on through cooperation between the federal and state governments. Special stress was laid on the importance of having child hygiene work conducted through the present health organizations of the different states.

The Public Health Service made a report of a rapid survey made of federal water supplies in relation to interstate traffic throughout the country in the last few weeks. The Public Health Service also announced a program for assisting state health departments by detailing to each an officer of the service who will assist in epidemiologic and other public health work at the request of the state and health authorities.

In the discussion on public health education, a program was placed before the conference, whereby the Public Health Service will furnish speakers, publications, films and other educational material, provided the states shared in the expenses involved. No final action was taken on the matter, but a committee was appointed to discuss it further, with a similar committee to be appointed by the Conference of the State and Provincial Boards of Health.

The program of cooperation between the Public Health Service and the state health authorities in the control of similar diseases was explained by Assistant Surg.-Gen. Claude C. Pierce. A large number of representatives of the venereal disease control work in the different states were present at the conference, and held a meeting taking up the problems relating to this work . A resolution was adopted by the conference endorsing the bill, known as the rural health act, which would extend the principles of federal aid in rural health work. The text of the resolution follows:

Resolved, That it is the sense of the Conference of the United States Public Health Service with the state and territorial health authorities, meeting in Washington, June 4 and 5, 1919, that on account of the greatly accentuated popular interest in public health work, incident to the examination and findings by Draft Boards, of widespread physical impairment among millions of apparently healthy registrants, and because of the present pronounced restlessness of rural local governments for breaking away from their former attitude of indifference to adequate measures of human conservation and in undertaking with or without the guidance of experienced health agencies, hastily prepared and varied programs of rural health work, that the present moment is of all times the most opportune and crucial for Federal and State Health Authorities to take steps for assisting local rural governments in the development of an economic, efficient and permanent system of rural health work and,

Be it further resolved, That it is the sense of this Conference that the best means for insuring the future of rural health work is the Federal Aid Extension Principle of Government (the wisdom and practicability of which has been demonstrated and established in providing for other rural needs, as in the matter of post roads, vocational education and farm life demonstration work), as represented in H.R.—2845 recently introduced in the present Congress and entitled "The Rural Health Act."

FOREIGN

Landouzy Memorial.—A committee has been formed at Paris to honor the memory of Professor Landouzy by founding at the Faculté de Médecine a museum to be called by his name. A medal is to be struck off to be given to each subscriber. The treasurer of the fund is M. P. Masson, 120 boulevard Saint-Germain, Paris.

Prize Offered by Spanish Gynecologic Association.—The *Archivos Españoles de Pediatria* states that the Sociedad Ginecologico Española has offered a prize of 500 pesos for the best article dealing with endocrinology in relation to infantile pathology, sent in to the secretary before Oct. 31, 1919. Address Mayor 1, Colegio de Médicos, Madrid.

Endowment of Motherhood.—The family endowment committee has laid before the national birth rate commission in London a proposition that the state provide a regular weekly income for families with children under 15 years of age. It is intended that the effect of this endowment will be to induce earlier marriages and will tend to remove the economic restriction of birth rate. The cost to the government will be about $1,200,000,000 a year.

Neutral Doctors Study Nutrition in Germany.—A dispatch from Consul Schmedeman, at Christiania, states that in response to a request received from a number of German and Austrian universities to appoint representatives on a commission of neutral doctors whose task should be to study the present state of nutrition in Germany and Austria, Professor Brandt of the medical faculty has gone to Germany. Sweden, Denmark, Holland, Switzerland and Spain will be represented on the commission. Possibly an American physician will also be asked to join it. The Swedish representatives are Professors Johansson and Gadelius.

Deaths in the Profession Abroad.—Dr. E. A. Tscherning, chief of the surgical department of the Kommunehospital at Copenhagen, one of the founders of the Danish and the *Nordisk Surgical Associations* in which he has served as president, as also in the Copenhagen Medical Society, aged 68.——P. J. Ménard of Paris, one of the younger set of physicians.——Dr. Martin Vallejo Lobón, professor of medical pathology and also of clinical medicine in the Barcelona medical faculty, and author of numerous works on clinical medicine, etc.——Dr. A. Schwob, physician to the French consulate of France at Geneva, Switzerland, for thirty-five years, aged 85.

Royal Army Medical Corps War Memorial.—A memorial is to be erected to the officers and men of all branches of the R. A. M. C. who fell in the war. These number 560 officers and 4,091 men of other ranks. A committee representative of all branches of the corps has been formed. Lieut.-Gen. Sir Alfred Keogh is chairman and Lieut.-Gen. Sir John Goodwin is vice chairman of the committee. The Duke of Connaught is honorary chairman. It is the plan of the committee to erect a permanent memorial or monument in London, with, if possible, replicas in Edinburgh and in Dublin; to create a fund from which grants in aid may be given to the families of members of every rank and branch of the service who have fallen or been disabled in the war or who may be in necessitous circumstances owing to the exigencies of military service; to establish scholarships or memorial prizes for research work. Suscriptions are invited and may be sent to Messrs. Holt and Co., 3 Whitehall Place, London, S. W., and should be described as for "The R. A. M. C. War Memorial Fund."

PARIS LETTER

Paris, *May 29, 1919.*

Tuberculosis a Reportable Disease

The Académie de médecine adopted the following resolution presented by Dr. Vaillard: 1. All cases of open tuberculosis must be reported as soon as the diagnosis is established. 2. The report will be made to an official of the health department, who will be bound to professional secrecy and who will attend to the institution of the necessary prophylactic measures when the attending physician cannot give assurances that these will be carried out. 3. The authorities will provide for needy patients the care necessary to restore them to health and will also give assistance to their families, if required.

The Académie also adopted unanimously the emendations offered by Dr. P. Reynier and by Professor Hayem which comprise the following points: a campaign against alcoholism, including the limitation of the sale of intoxicating drinks; elimination of insanitary homes; better living conditions for the laboring class in the large centers of population; development of the Grancher work; compulsory disinfection of homes, thus giving positive assurance against spread of the disease; establishment of dispensaries, sanatoriums, special hospitals, farm colonies; extension to the other departments of France of the infant welfare work already established in the department of the Seine; introduction of sanitary regulations with reference to abattoirs and stables; the building of good, reasonably priced homes for the working class; prophylactic measures against syphilis.

Inspection of the Surgical Service of the Army

An inspection department of the various surgical services of the army has been created as part of the Service de Santé militaire and will be in charge of an inspector-general. Dr. Sieur, president of the consulting staff of the Service de Santé, has been assigned to this work.

Institute of Child Welfare

The American Red Cross and the Children's Welfare League of the United States have together appropriated 1,500,000 francs for the establishment of an Institute of Child Welfare, on the condition that 1,000,000 francs shall be collected in France for this work. The office of the institute will be located in the buildings of the Paris medical faculty. A committee has been appointed to take charge of the collection of funds in France, and about 500,000 francs has already been subscribed. The secretary of the committee is Dr. B. Weil-Hallé.

Help for Nursing Mothers

The society founded in aid of nursing mothers (Allaitement maternel et des refuges-ouvroirs) recently met in general session under the presidency of Dr. Louis Mourier, under-secretary of state for the Service de Santé militaire, assisted by Mr. P. Strauss, senator from the department of the Seine, and Mr. Mesureur, director of public charities. Dr. Mourier commended highly the coordination of all the various agencies engaged in child welfare. Mr. Abel Combarieu stated that many large problems would soon be attacked for which Baroness Leonino had recently donated a fund of 200,000 francs.

Honors for the Personnel of the American Hospitals

Several officers and nurses of the Field Ambulance at Ferrières-en-Gatinais have received evidences of official recognition at the hands of Dr. Louis Mourier, of the Service de Santé militaire, for services rendered at the front and in the Paris military district, especially during the air raids.

Personal

The council of the Paris medical faculty has appointed Dr. Balthazard professor of legal medicine. Dr. Balthazard is a medicolegal expert and has officiated in a number of sensational cases. Dr. Leon Bernard was appointed professor of hygiene, succeeding the late Professor Chantemesse. Dr. Abadie of Bordeaux was appointed clinical professor of mental diseases, and Dr. Dubreuilh, also of Bordeaux, was made professor of general anatomy and histology in the Bordeaux school. Dr. Spillmann of Nancy was appointed clinical professor of dermatology and syphilis on the Nancy medical faculty.

Dr. Bellencontre has been elected president of the Association générale des médecins de France, succeeding the late Professor Gaucher.

LONDON LETTER

London, May 21, 1919.

An American Hospital for London

The idea of an Anglo-American entente has been taken up not only among the public but in the medical profession with a good deal of enthusiasm. Its latest manifestation is a movement to establish an American hospital in London. The headquarters are to consist of a hospital, a library, lecture theaters, demonstration rooms, reading rooms, and so forth. American physicians will thus possess a rallying point when visiting London. It is understood that Lord Reading has accepted the presidency of the scheme and that Mr. Tait is taking a prominent part in furthering it. It is hoped the new hospital may become a kind of Rockefeller Institute in London.

A Conference of Medical Organizations

The British Medical Association has for some time declined to cooperate with other medical organizations engaged in political work on the ground that its activities cover the whole field and that the objects of the profession are to be achieved by the union of its members in one body, while several bodies mean disunion and weakness. However, the union of the whole profession, at present at any rate, is an impossible ideal. Recently there have been formed several bodies which seem to have come to stay. They profess not to be hostile to the British Medical Association, though their *raison d'être* is that it cannot satisfactorily perform the work which they have undertaken. The British Medical Association has now abandoned the policy of isolation and has consented to confer with other bodies. The approaching formation of a ministry of health has aroused considerable apprehension in the profession, and therefore medicopolitical activity. On the initiative of the Association of Panel Committees, a conference of representatives of the various medical organizations has been held by invitation of the Council of the British Medical Association, to discuss the possibilities of common action, the best means of securing for the Medical Consultative Council of the Ministry of Health the confidence of the great body of the profession, and the best means of securing the support of all medical organizations for the National Insurance Defense Trust. Organizations that were invited to send representatives include the Association of Panel Committees, the Medicopolitical Union, the Medical Parliamentary Committee, the Medical Women's Federation, the National Medical Union and the State Medical Service Association. The nature of these various organizations has been described in previous letters. It will be seen that all phases of medical opinion from the Medicopolitical Union, which is bitterly opposed to state interference in the relations of physicians and patients, to the State Medical Service Association, which is a socialistic body desirous that the practice of medicine should be entirely controlled by the state, were represented. A representative of the Association of Panel Committees (an organization representative of physicians working under the insurance act) stated that the position of his association was that there should be a body directly representative of panel committees and looking specially after their interests. His association had used influence to modify the composition of the Insurance Acts Committee in that direction. It desired to bring about unity in the profession and thought the time had come when the British Medical Association should foster a federation of all medical associations. A representative of the Medicopolitical Union agreed that there was danger in the competition now going on between various medical organizations, and also in the existence of rival deputations on the same subject. His union did not desire to injure the British Medical Association or to rival it. He submitted, as a basis of an understanding, that: (*a*) There should be recognition of the trade union as a possible valuable adjunct in medical organization; (*b*) the Medicopolitical Union should be frankly recognized as the official body representing those members of the profession who wished to belong to a medical trade union; (*c*) the British Medical Association should recognize the Medicopolitical Union as the agent for the profession in collective bargaining in the final resort—that is, if ordinary means of persuasion had failed, and there was any question of refusing to accept or renew contracts or anything which might be construed as being in "restraint of trade," the matter should be dealt with by the Medicopolitical Union (it may be explained that anything done "in restraint of trade" is illegal except in the case of a trade union; (*d*) further conferences should be held to define limitations of work and prevent overlapping, and (*e*) there should be mutual agreement in important matters before any action is taken by way of joint deputations. A committee was appointed to consider the best ways of promoting common action.

The Dogs' Protection Bill

Strong opposition to the dogs' protection bill (The Journal, May 3, 1919, pp. 1311, 1313) is being organized in the profession. A deputation of fellows of the Royal Society of Medicine has lodged a protest with the government. Sir George Makins, president of the Royal College of Surgeons, referred to a resolution of the council of the college condemning the bill, and said that during the years in which he had been practicing there had been a very general change in the trend of thought with regard to surgical science; practice was being founded less and less on any form of empiricism, and more on rational data which in large part had been forthcoming as a result of experiments on animals. There were very strong reasons why the dog should be used. In the first place, there was an ample supply of dogs. A large number of dogs were now being destroyed in order to get them out of the way in a manner no more humane than that of the laboratory. The dog was suitable with regard to its size and the character of its tissues. Experiments did not entail suffering. They had to be performed with a particular technic, and if wounds were permitted to become infected the experiment was spoiled; in the absence of infection, the wounds were not painful. Vascular surgery was founded entirely on experiments on dogs. The technic of such an experiment as transfusion of blood had been perfected as a result of experiments on dogs. Experiments on dogs had furnished the knowledge that in place of destroying or obliterating an artery when wounded it was possible to repair it. They had shown also that an organ might be removed from an animal and an organ from another animal put in its place. All these were things from which it was possible to predict future fruit. It seemed extraordinary that at a time when the whole nation had suddenly awakened to the fact that success in war or in industry was bound up with experimental research, a few persons who were unable to appreciate the importance of experiments on vital processes should be so far successful in their attempts to hinder the advance of science in matters of life and death to the human race. He regarded the dog as doubly protected, for, in the first place, operations had to be performed in the most careful manner or they were useless, and, in the second place, any abuses were already prevented by legislation. He did not find fault with the restrictions already imposed.

Sir William Osler said that this bill was a test case—not for the dog, or for the medical profession, but for the intelligence of the House of Commons. If there was one thing more certain than another in the history of the science of medicine, it was that experiment had brought it to its present position, and if the experimental work which had been done from Harvey onward were examined, it would be found that four fifths of it had been done on the dog. When a student in Berlin in 1873, he saw in a small laboratory a most interesting series of fundamental experiments on the localization of brain function. These experiments were made on dogs; it was not until later that monkeys were procured and worked on by Horsley and others. In 1889, he saw in America a man who had had for five or six years recurring convulsions of a very serious character, and as a result of that early work on the dog, King removed a tumor from that man's brain, and the man lived for thirty years. There were now hundreds of persons alive and well and comfortable from whom brain tumors and spinal cord tumors had been satisfactorily removed simply because of early canine experiment. No young surgeon could grow to his full measure unless he was an experimental surgeon and in his own career had opportunities for doing experimental work.

Sir Hamar Greenwood, parliamentary secretary to the Home Office, said in reply that the government was opposed to the bill and would do its best to prevent the coming into force of a measure for stopping research. He had put down an amendment to the bill which provided that when an applicant wished to experiment on a dog he must state that the object would be frustrated unless a dog was used and that no other animal was available for the purpose. This would put dogs in the same position as horses now occupied under the law. Sir William Osler said he would prefer a straight negative: the amendment would impose an additional and unnecessary restriction. Sir Hamar Greenwood said that the amendment was made for further supervision rather than restriction, and Sir Watson Cheyne said that as a matter of policy it would be well to accept the amendment.

MEXICO LETTER

City of Mexico, *June 2, 1919.*

A New Sanitary Code

The Departamento de Salubridad Pública has drawn up a new Codigo Sanitario which is to be submitted to the Chamber of Deputies for consideration and adoption, as it is believed that the regulations now in vogue are inadequate as they have not been revised to keep pace with progress. Among the innovations proposed in the new Code is the prohibition of the practice of medicine to foreigners unless they can prove that they have taken the respective medical course in a medical college in good standing. At the same time, the regulations provide that the practice of medicine is to be permitted to persons without a degree on condition that they announce on their placards that they are "médicos prácticos." The regular physicians with a degree must publicly announce their educational credentials specifying the university or other institution where they obtained their diplomas. It is considered probable that in view of the urgent character of other matters before the legislature, such as legislation on labor and on affairs connected with the oil industry, which the chamber of deputies now has under consideration, that the executive authority will be authorized to issue officially the new Code.

Smallpox

The state of Guerrero, on the Pacific Coast, is now taking its turn in the contingent which we habitually pay to variola. According to dispatches from there a large number of persons have been attacked and the mortality is causing alarm as fully 20 per cent. of the victims die.

University Interchanges

The Universidad Nacional here has received through diplomatic channels an appeal from two members of the teaching force of the University of Colombia—I do not know of what faculty—who are desirous to come to Mexico for teaching purposes and with the aim to draw closer together the intellectual and friendly relations between the two countries.

The rector of the University of Morelia has asked the University of Mexico to bear in mind the students of the former university in case it is decided to send a party of students from Mexico to complete their studies in some institution of the same kind in the United States, a subject which has been much talked of lately.

Personal

Dr. Jesús Diaz de León, professor at the Escuela de Altos Estudios here, and at one time its director, has recently died at an advanced age. He was distinguished as a linguist, held the chairs of Hebrew, Greek and Latin, and wrote a work on "Greek Roots in the Spanish Language," and a translation from the original Hebrew of the "Song of Songs." He belonged to various scientific societies at home and abroad.

Dr. José León Martínez, professor of clinical medicine in the Faculty here and in the Escuela Medico-Militar, has been elected to membership in the Academia de Medicina. The paper he read on that occasion was on the symptomatology of influenza.

RIO DE JANEIRO LETTER

Rio de Janeiro, May 5, 1919.

Rural Sanitation

The government has promulgated a law, organizing rural sanitation in the outskirts of Rio de Janeiro and the states of Brazil, the principal aim of which is to combat hookworm disease and malaria. All expenses are borne by the federal government for Rio and the territory of Acre, situated in the extreme north of the republic.

In accordance with the constitution, public health service within state limits is under the direction of the state government. When under the direction of the federal authorities, half of the expenses are paid by the latter; but if directed by the state, the Union will enter only with one third. In case a state government paying half of the expenses, signs a contract with the Rockefeller Foundation to combat at least two endemic infectious diseases, the Union will pay one quarter.

The president of the republic (Relfim Moreira) praised highly the excellent work done by the Rockefeller Foundation in the states of Rio, Minas and São Paulo.

The director of public health exercises no jurisdiction over the rural sanitation service; that is, under the direction of the secretary of the interior. This is a great mistake, as has been pointed out to the government by various medical associations.

Protection of Railway Employees Against Infectious Diseases

The secretary of public works has initiated a service, obliging all federal, state and private railway companies, throughout the country, to protect their employees against infectious diseases, especially hookworm and malaria.

Eradication of Leprosy

The chief of the Rockefeller Foundation, in agreement with the secretary of the interior, who is responsible for the public health service, will send one of his assistants to travel through the country investigating leprosy and to see what means can be taken to eradicate this hideous disease.

In the last days of April, the foundation stone was laid for a leprosarium, which is being built in Mogy das Cruzes, by the government of São Paulo, in the state of the same name. It will contain all modern improvements, including a theater, cinema, library, playgrounds, etc. Its cost is estimated at about $1,200,000.

Commission to Draw Up Sanitary Code

The government has appointed five prominent physicians and a leading consulting lawyer to draw up a sanitary code, although according to the point of view of the secretary of the interior, this code can be enforced constitutionally only in the limits of the capital and the territory of Acre.

Reorganization of Oswaldo Cruz Institute

The Oswaldo Cruz Institute has been reorganized. Seven new assistants and six subassistants have been appointed.

Marriages

Francis Patrick Machler, Capt., M. C., U. S. Army, Chicago, on duty at Embarkation Hospital, Camp No. 2, Newport News, Va., to Miss Ruth A. Steele of Rogers Park, Chicago, at Richmond, Va., May 29.

George Braunlich, Lieut., M. C., U. S. Army, Davenport, Iowa, on duty at the Department Hospital, Manila, P. I., to Miss Karen Beck, San Francisco, at Manila, April 30.

Winfred Overholser, Lieut., M. C., U. S. Army, Westboro, Mass., to Miss Dorothy Stebbins of Worcester, Mass., June 4.

Frank Thomas Fort, Louisville, Ky., to Miss Elizabeth A. Brown of Baltimore, June 4.

Leon Unger, Chicago, to Miss Nina Kleinman of New York City, June 1.

Deaths

James Ewing Mears, Philadelphia; Jefferson Medical College, 1865; aged 80; a fellow of the American Surgical Society; honorary president of the Philadelphia Academy of Surgery; lecturer on practical surgery and clinical gynecology in his alma mater; professor of anatomy and surgery in the Pennsylvania College of Dental Surgery; acting executive officer of military hospitals during the Civil War; once captain in the quartermaster's corps of the Indiana Volunteers, and surgeon in chief of the Pennsylvania National Guard; author of a textbook on "Practical Surgery"; died at his home, May 28.

Frederick Porteous Henry ⊕ Philadelphia; College of Physicians and Surgeons in the City of New York; 1868; aged 74; one of the original one hundred members of the Association of American Physicians; professor of principles and practice of medicine in the Woman's Medical College of Pennsylvania, Philadelphia, since 1891; a fellow, once president and honorary librarian of the College of Physicians of Philadelphia; author and editor of several works on practice of medicine and history; died at his home, May 24.

James Mason Barstow, Council Bluffs, Iowa; College of Physicians and Surgeons, Keokuk, Iowa, 1880; Bellevue Hospital Medical College, 1884; aged 64; professor of applied therapeutics in the John A. Creighton Medical College, Omaha; president of the staff of St. Bernard's Hospital, Council Bluffs; once president of the Missouri Medical Society; chief of the board of insanity commissioners, Council Bluffs for more than twenty years; died at his home, May 19, from heart disease.

William Gilson Farlow, Cambridge, Mass.; Harvard University, 1870; aged 74; professor of cryptogamic botany in Harvard University since 1879; a fellow of the American Association for the Advancement of Science, vice president in 1887 and 1898, and president in 1905; honorary L.L.D., Harvard, 1896; University of Glasgow, 1901, and University of Wisconsin, 1904; Ph. D., University of Upsala, Sweden, in 1907; a botanist of international reputation; died at his home, June 3.

John Augustus Donovan ⊕ Lewiston, Me.; New York University, New York City, 1866; aged 77; once president of the Maine Medical Association, and Androscoggin County Medical Society; surgeon in chief of the Central Maine General Hospital, Lewiston, from 1891 to 1906, and thereafter surgeon emeritus of the institution; a member of the state legislature in 1913 and 1914; died suddenly while in church, May 24.

Julius Martin McLeod, Lincoln, Neb.; Ensworth Medical College, St. Joseph, Mo., 1890; Lincoln (Neb.) Medical College, 1895; aged 53; professor of surgery in his alma mater; professor of principles and practice of surgery and clinical surgery and president of the corporation of the Nebraska College of Medicine, Lincoln; a member of the surgical staff of the New Lutheran and St. Elizabeth hospitals, Lincoln; died at his home, May 18, from pneumonia.

John Frederick Barnett, West Haven, Conn.; Yale University, New Haven, 1869; aged 72; a member of the Connecticut State Medical Society; for many years treasurer of the borough of West Haven; for nearly a quarter of a century health officer (coroner) of the town of Orange; died in the New Haven Hospital, June 4, from cerebral hemorrhage.

George Wieseckel, Brooklyn; New York University, New York City, 1884; aged 56; dispensary physician to St. Catherine's Hospital, Brooklyn, from 1885 to 1889, and vaccinator and physician on the summer corps of the Brooklyn Health Department from 1888 to 1892; died in St. Catherine's Hospital, May 29, after an operation for appendicitis.

Sarah C. Jackson, Greensburg, Ind.; Central College of Physicians and Surgeons, Indianapolis, 1891; Southwestern Homeopathic Medical College, Louisville, Ky., 1894; aged 77; an inmate of the Indiana Odd Fellows' Home at Greensburg for two years; died in that institution, May 11, from asthma.

Watson Meredith Gentry, Franklin, Tenn.; New York University, New York City, 1855; aged 88; for four years a surgeon in the Confederate service during the Civil War; surgeon in chief of hospitals at Montgomery, Ala., in 1864 and 1865; died at his home, May 18.

Oliver Grimshaw, Swedesboro, N. J.; Hahnemann Medical College, Philadelphia, 1890; aged 58; who had been under

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⊕ Indicates "Fellow" of the American Medical Association.

treatment in a sanatorium for nervous disease; died at his home, May 27, from the effects of poison, self-administered, it is believed, with suicidal intent.

George Sloan, North Yakima, Wash.; Bellevue Hospital Medical College, 1878; aged 62; a member of the Washington State Medical Association; surgeon of the Northern Pacific Coal Company from 1888 to 1899; died at his home, May 23, from heart disease.

Charles H. Wells ⊕ Shelton, Wash.; Michigan College of Medicine and Surgery, Detroit, 1893; aged 58; who was injured in an elevator accident in San Francisco, April 16; died from his injuries in the Central Emergency Hospital, San Francisco, April 17.

Charles Henry Brockett, New Haven, Conn.; Yale University, New Haven, 1886; aged 56; for many years town physician, and in charge of the medical department at Springside Home; died at the New Haven Hospital, May 16, from cerebral hemorrhage.

Adolph Gustav Sund ⊕ **Asst. Surg., Lieut. (j. g.), U. S. Navy;** University of Minnesota, Minneapolis, 1917; aged 26; on duty at the U. S. Naval Hospital, Fort Lyon, Colo.; died at Cragmore Sanatorium, Colorado Springs, Colo., May 8, from tuberculosis.

Philip Joseph Catoggio, New York City; Eclectic Medical College of the City of New York, 1910; aged 34; a member of the Medical Society of the State of New York; visiting physician to the Italian Hospital; died at his home, May 29.

Ernest Heber Deaton, Hot Springs, S. D.; Ohio Medical University, Columbus, 1896; aged 43; a veteran of the war with Spain; assistant superintendent of a sanatorium at Black Hills; was found dead in bed at Johnstown, Pa., May 19.

Lester M. Drake, St. Joseph, Mo.; Eclectic Medical University, Kansas City, Mo., 1904; aged 40; was run over by a train at New Hampton, Mo., May 23, and died the same day from his injuries at Ensworth Hospital, St. Joseph.

Ashton Morrell Baldwin ⊕ **Lieut., M. C., U. S. Army,** Marion, Ind.; University of Louisville, Ky., 1917; aged 28; who had been on duty at Base Hospital No. 21, Denver; died at Aurora, Colo., April 16, from tuberculosis.

Arthur Duncan Sinclair, Toronto, Ont.; University of Minnesota, College of Homeopathic Medicine and Surgery, Minneapolis, 1908; Syracuse (N. Y.) University, 1918; aged 36; died at his home, May 25, from pneumonia.

Cassius M. Porter, Hillsville, Pa.; Philadelphia University of Medicine and Surgery, Philadelphia, 1871; aged 72; for several years a member of the board of education; died at his home, May 20, from cerebral hemorrhage.

Floyd Burke Riley ⊕ Monrovia, Calif.; Rush Medical College, 1908; aged 35; formerly of Chicago; instructor in surgery in his alma mater; died in Monrovia, May 16, from tuberculosis of the larynx.

Jedidiah Howe Adams, Paoli, Pa.; University of Pennsylvania, Philadelphia, 1889; aged 53; from 1889 to 1892; editor of the *University Medical Magazine;* died suddenly at his home, in Paoli, May 26.

Bruno John Ferdinand Getzlaff ⊕ Sutton, Neb., formerly of St. Joseph, Mich.; Medical College of Ohio, Cincinnati, 1892; aged 51; died at his home, May 22, from chronic nephritis.

Somerset R. Waters, Watersville, Md.; University of Maryland, Baltimore, 1858; aged 89; a member of the Medical and Chirurgical Faculty of Maryland; died at his home, May 30.

John Dubois Dolan, New York City; Medical College of the State of South Carolina, Charleston, 1900; medical superintendent of the Reception Hospital; died at his home, May 28.

Ralph Maclay Lashell, Media, Pa.; Jefferson Medical College, 1888; aged 76; for fifty-two years a practitioner of medicine; a veteran of the Civil War; died at his home, May 20.

John Alphonsus Lanigan, Niagara Falls, N. Y.; New York University, 1877; aged 64; at one time a member of the Provincial Medical Board of Nova Scotia; died at his home, May 21.

Nicholas Walter Pendergast, Syracuse, N. Y.; University of Syracuse, N. Y., 1901; aged 40; medical inspector in the public schools from 1907 to 1915; died at his home, May 26.

David Theodore Martin ⊕ Pomeroy, Iowa; Rush Medical College, 1882; aged 64; local surgeon of the Illinois Central Railroad; died at his home, May 22, from nephritis.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

PULVOIDS CALCYLATES COMPOUND

Report of the Council on Pharmacy and Chemistry

The Council has authorized publication of the following report, not so much because the preparation with which it deals is of any great importance, but as a protest against the large number of similar irrational complex mixtures which are still offered to physicians.

W. A. Puckner, Secretary.

Pulvoids Calcylates Compound (The Drug Products Co., Inc.) are tablets each of which is claimed to contain:

> "Calcium and Strontium Disalicylate, 5 grs.; Resin Guaiac, ½ gr.; Digitalis, ¼ gr.; Cochium [colchicum?] Seed, ¼ gr.; Squill, ¼ gr.; Cascarin, 1/10 gr. with aromatics."

"Pulvoids Calcylates Compound (Sugar coated orange color)" is advertised (*Medical Times,* January, 1919) as being "Analgesic-Antipyretic and Diuretic," and is included in the preparations designated by the advertiser as "Approved Remedies for LaGrippe and 'Flu.'" The claim that "Their tolerance is remarkable" refers not to the physicians who tolerate such products, but to the alleged fact that Pulvoids Calcylates are tolerated remarkably well. The advertisement continues:

> "May be given persistently and continuously without gastric disturbances."
>
> "They are uniformly efficient. More certain in effect than the ordinary Salicylates."

It would be difficult to find an advertisement of equal length containing a greater number of misleading or directly false statements than are found in this one. The Journal (April 22, 1916, p. 1307) has called attention to the lack of justification for this absurd mixture of drugs and has discussed the preparation with especial reference to its use in acute rheumatism, in which the salicylates occupy a special field. The advertisement just quoted mentions La Grippe and "Flu" (or Influenza) as special fields of usefulness for this preparation. This, apparently, is merely an attempt to spread the sail for any breeze. Salicylates have a field of usefulness in influenza in that they often afford relief from pain. There is no reason to suppose that a mixture containing calcium and strontium salicylates—the "Calcium and Strontium Disalicylate" of Pulvoids Calcylates is probably a mixture of calcium and strontium salicylate[1]—has any greater salicylic effect than an equal amount of sodium salicylate. On the other hand, it is worse than useless to give colchicum, squill and digitalis for the relief of such pains.

Should cardiac dilatation develop, and digitalis medication be required it would be impossible to adjust the dose of such a mixture with special reference to the digitalis action, which alone would be indicated for that condition. No educated physician at present would think of giving resin of guaiac merely because his patient required digitalis, nor would he administer "cascarin," whatever that may be, in fixed doses, every time he gave a dose of a salicylate.

It is impossible to recognize the several effects induced by this therapeutic omneity, and the medical profession should consider it an insult to be offered mixtures such as Pulvoids Calcylates Compound.

Pulvoids Calcylates Compound is, per se, of no great importance; it is one of a type. It has been selected as one of the utterly irrational and therefore potentially dangerous mixtures, that may be found by the score or the hundred in the catalogues of practically every pharmaceutical manufacturing firm in the United States.

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[1] See report, The Journal, Sept. 9, 1916, p. 827.

Correspondence

MENINGOCOCCUS INFECTION

To the Editor:—The very unusual opportunity afforded Major Herrick to study an epidemic of meningitis in which the septicemic type predominated (THE JOURNAL, Jan. 26, 1918, p. 227; *Arch. Int. Med.* **23**:409 [April] 1919) has given rise to a great deal of much needed discussion of the subject of meningitis. Of course, it has long been generally believed that the meningococcus gains access to the meninges by way of the blood stream. In most cases, however, this invasion of the blood stream seems to be of the nature of a bacteremia rather than a septicemia, since blood cultures are so often negative; since the number of organisms, when present, is usually so small; and since their presence is so brief, as shown by the failure in most instances to obtain a second positive blood culture.

Moreover, it has also been recognized for a long time that there is a septicemic type of meningitis, usually rare, in which the invasion of the meninges may be late, or even may not occur. In the last instance, of course, the term "meningitis" is a misnomer. It is obvious that cases of this kind are more likely to have the extrameningeal infection which Major Herrick has encountered in the epidemic at Camp Jackson.

It is probable that this type of case occurred at Camp Jackson in greater numbers and was more thoroughly studied than it has ever been before. Nevertheless, this must not make us lose sight of the fact that this type of case is unusual in civilian practice, at any rate. Indeed, it did not predominate in all of the epidemics at the army camps, notably at Fort Riley, where a hemorrhagic eruption was present in only 6 per cent. of the cases followed by recovery and in 14 per cent. of the fatal cases. At Camp Beauregard, on the other hand, the rash was a more prominent feature, being present in about 80 per cent. of cases. Stone and Truitt report from Fort Riley that "positive blood cultures were obtained in a larger percentage of cases with petechiae, while negative blood cultures were as a rule obtained in those patients not manifesting petechiae." It should be further noted that while Herrick at Camp Jackson and Landry and Hamley at Camp Beauregard obtained a much lower mortality by combining the intravenous and the intraspinal use of serum, Stone and Truitt had about the same result by the two methods: 28.1 per cent. for thirty-two patients treated by the combined method, and 28.8 per cent. for the total 191 cases. Of course, in considering the lower mortality obtained by the combined method by Herrick and by Landry and Hamley, one must remember that this was employed during the latter part of the course of the epidemic, when the mortality is practically always declining; also that experience in treating meningitis is a factor that always influences the mortality.

While it is quite definitely proved that the intravenous administration of serum is of value in cases of the septicemic type, it by no means follows that it is of value in the more common type with a sudden onset without a rash or with a few petechiae that last only a day or two and with signs of a meningitis, not a septicemia. Indeed, the results at Fort Riley seem to prove that it is not of value in these cases.

I confess that I am somewhat afraid of the reactions following intravenous injections, as they are at times much more severe than those following intrathecal injections. I have in mind one patient that died immediately after an intravenous injection of the serum, though he had been improving under the intraspinal treatment, and necropsy showed that his meningitis had practically cleared up. An overenthusiastic attending physician, however, wishing to leave nothing undone, insisted on an intravenous injection. Perhaps if adequate precautions had been taken, the unfortunate accident might have been avoided; but I think the doctor who gave this treatment was probably quite as competent and careful as the average physician will be. Another patient developed signs of cerebral hemorrhage while serum was being given intravenously, and died about eight hours later without recovering consciousness. Of course, this may not have been the result of the intravenous injection.

Several other severe but not fatal reactions have come under my observation or to my knowledge. If I err in wishing to avoid intravenous injections unless they are definitely indicated, I am in excellent company, for Netter says, writing even of meningococcal septicemia: "It is, therefore, more advantageous to substitute intrathecal injection, which is less dangerous than the intravenous one, which is apparently the most logical method." This is particularly interesting because Netter had earlier advised the intravenous treatment. Of course it must be kept in mind that serum injected intraspinally passes from the subarachnoid space into the veins, while the reverse action does not take place.

But the most important reason for carefully defining the use and the limitation of the intravenous injection is the fact that in some instances that have come to my attention, physicians have received the impression from the emphasis laid on the value of intravenous injections that they may be as good as, if not better than, intraspinal injections; in fact, that they may even replace the latter. For some reason, physicians generally seem to regard the technic of intravenous injection as easier than intraspinal, and would, if it were a question of choice, adopt the former. A study of Major Herrick's contribution leaves no doubt that he did not intend to give this impression. But he has, I think, failed to emphasize sufficiently the fact that the type of case at Camp Jackson is a heretofore unusual one.

In regard to the question of terminology, the use of "cerebrospinal" certainly seems superfluous, as all kinds of meningitis usually affect the meninges of both brain and cord. It has seemed to me that the term "epidemic meningitis" is simple and clear since the meningococcus is the only organism that causes epidemics of meningitis, and also it ought to be easy to adopt since physicians are accustomed to speak of "epidemic cerebrospinal meningitis." The term "meningococcus meningitis" is perhaps preferable, since it exactly defines the etiology; but it might not be so easily adopted, as physicians are not so used to it.

JOSEPHINE B. NEAL, M.D., New York.

PHENOL WITH HYDROGEN PEROXID FOR LOCAL APPLICATIONS

To the Editor:—Referring to Dr. Soresi's article (THE JOURNAL, May 3, 1919, p. 1288), I should like to call attention to the procedure employed by me for more than eight years.

If one applies liquid crystallizable phenol (full strength) with a brush or a swab to the surface of the skin or of a mucous membrane, a whitish spot results, followed shortly by local anesthesia. This method can be used, as suggested by Dr. Soresi, for many operations; it will cure light infections, as from ingrowing toe nails, furuncles, acne, ulcerations, or infection of the hysterovaginal folds. I have suggested crystallizable phenol, since that liquefied by the addition of alcohol or glycerin does not produce such an intense blanching and is less efficient.

Now comes my accidental discovery. If after the white spot appears we touch it with undiluted hydrogen peroxid, it will not disappear if the tissues are normal; if the submucous or subepidermic tissues have suffered alterations, the white spot will darken until it becomes black, and the nearer to the surface the affected tissues lie the darker it will become. This black spot is in reality a scar which can be opened slowly, since it is anesthesized, and the incision will surely open a way for the pus, débris, etc. It is a splendid method of diagnosis, prognosis and treatment.

Let us suppose that we have to deal with a Velpeau's syphilitic chancre healed in the "shirt button" way; the hardness remains and there is no suppuration. This chancre is not really healed, but just covered by the membrane or skin which protects it. It is touched with liquid phenol and forms a whitish spot. It is washed with a swab soaked in peroxid to make the spot disappear, and the white stain becomes gray, and in some places there are some darker or black spots indicating the presence of some abnormal tissues.

were licensed by virtue of a commission in the Medical Corps. The following colleges were represented:

College PASSED	Year Grad.	Per Cent.
Rush Medical College	(1917) 89.5; (1918)	79.3, 85.8
Univ. of Mich. Med. School	(1898) 83.9; (1909) 85.6; (1917)	79
Jefferson Medical College	(1918)	88
Marquette University	(1919)	79, 80, 81.9, 83, 83.9, 84, 84, 85, 85.3*, 85.4, 85.4, 86.5.
Milwaukee Medical College	(1909)	76.9

College LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
Rush Medical College	(1914)	Illinois
Johns Hopkins University	(1908)	New York
Eclectic Medical College	(1910)	Arkansas

College LICENSED BY ENDORSEMENT OF CREDENTIALS	Year Grad.	Certificate from
Chicago College of Medicine and Surgery	(1916)	U. S. Army
Johns Hopkins University	(1908)	U. S. Navy
University of Pennsylvania	(1917)	U. S. Army

*Received certificate of graduation. M.D. degree will be granted on completion of hospital internship.

Connecticut March Examination

Dr. Charles A. Tuttle, secretary of the Connecticut Medical Examining Board, reports the written and practical examination held at New Haven, March 11-12, 1919. The examination covered 7 subjects and included 70 questions. An average of 75 per cent. was required to pass. Of the 28 candidates examined, 18 passed and 10 failed. The following colleges were represented:

College PASSED	Year Grad.	Per Cent.
Yale University	(1913)	84.2
Georgetown University	(1918)	79.1
Loyola University	(1917)	77
Harvard University	(1919)	77.7
Tufts Coll. Med. Sch.	(1917) 85.1; (1918) 80.5, 83.7; (1919)	82.7
Columbia University	(1916) 77.1, 83.9; (1917)	84.9
Univ. and Bellevue Hosp. Med. Coll.	(1916) 78.2; (1918)	85.5, 88.8
Jefferson Medical College	(1916)	75.2, 84.9
University of Pennsylvania	(1918)	83.2
McGill University	(1918)	77.7
FAILED		
Georgetown University	(1917)	74.4
University of Louisville	(1912)	66.8
Maryland Medical College	(1913)	64.6
College of Physicians and Surgeons, Boston	(1908)	65.9
Harvard University	(1915)	73.4
Tufts College Medical School	(1919)	69.4
University of Vermont	(1914)	67.8
Medical College of Virginia	(1917)	62.9
Milwaukee Medical College	(1903)	67.6
McGill University	(1918)	70.5

Book Notices

The Blind, Their Condition and the Work Being Done for Them in the United States. By Harry Best, Ph.D. Cloth. Price, $4. Pp. 763. New York: The Macmillan Company, 1919.

The author, whose previous compilation entitled "The Deaf" is well known, has now prepared this work of reference on conditions of the blind in the United States. The first part is general, giving statistics, compilations of judicial decisions and statements regarding the economic condition of the blind, and the cost of this deformity to the state. The second part deals with the prophylaxis of blindness and quotes freely from well-recognized statistics as to various causes. It takes up the general subject of heredity in its relation to loss of sight, follows with a discussion of trachoma, ophthalmia neonatorum and other diseases, and then considers blindness, accidents and methods of prevention. In one chapter of this part of the book the author demonstrates that blindness has, within a measurable time, shown on the whole a decrease, although not a material one, and that the chances are that the decline will continue. The final chapter of this part discusses organized movements for the prevention of blindness. The third part is concerned with the education of blind children. It is largely historical, discussing developments in various states, and giving special attention to the facilities available both from the standpoint of financial provisions and as concerns the qualification of various schools. The fourth part, "Intellectual Provision for the Adult Blind," traces the development of the Braille system, analyzing the literature at present available for the blind and enumerating the libraries that have been established. This section also includes a discussion of homes for blind adults and blind children, and industrial establishments providing these unfortunates with a means of economic independence. Several chapters are devoted to indemnities for loss of sight and to pension systems for the blind. Part six is devoted to the organizations interested in the care of the sightless.

The author has rendered a great service in compiling under one cover the extensive amount of valuable data that are available in this book. It is almost encyclopedic in character, and no one who is at all interested in the care of the blind, from any point of view, should fail to avail himself of this most useful work.

Sane Sex Life and Sane Sex Living. By H. W. Long, M.D., M. R. C. Cloth. Price, $5. Pp. 157. Boston: Richard G. Badger, 1919.

This book, we are told, was prepared especially to fill a long-felt want, that is, to supply a book which physicians may recommend to patients who require information on sex matters and sex living. Unfortunately, the book advances views and opinions that would not be endorsed by physiologists, much less by social workers. The author seems to believe that it is necessary to stimulate the sex interest and the sex function, and lays particular stress on methods for this purpose. We cannot commend the book as a safe one for the purpose for which its author states it was written.

Psychotherapeutics. By Frederick H. Gerrish, James J. Putnam, E. W. Taylor, Boris Sidis, George A. Waterman, John E. Donley, Ernest Jones, Tom A. Williams and Morton Prince. Cloth. Price, $1 net. Pp. 186. Boston: Richard G. Badger.

This book, of which the first edition appeared in 1909, consists of a series of papers on psychotherapeutics by various authors. These essays were originally published in the *Journal of Abnormal Psychology* and then gathered in book form. For the purpose of the present edition some revisions have been made, bringing the book up to date. For those wishing a beginning knowledge of psychotherapy, the book will be found suggestive.

A Manual of Gynecology. By John Cooke Hirst, M.D., Associate in Obstetrics, University of Pennsylvania. Cloth. Price, $2.50. Pp. 466, with 175 illustrations. Philadelphia: W. B. Saunders Company, 1918.

This summary of Dr. Hirst's lectures is a most practical work. The chapters on the breast, the rectum and diseases of the urinary tract are especially good. The subject of gynecology is briefly and systematically covered. As a concise discussion of the subject, this book is excellent.

The Diagnostics and Treatment of Tropical Diseases. By E. R. Stitt, A.B., Ph.G., M.D., LL.D., Rear Admiral, Medical Corps, U. S. Navy. Third edition. Cloth. Price, $2 net. Pp. 534, with 119 illustrations. Philadelphia: P. Blakiston's Son & Co., 1919.

This book by Admiral Stitt is well known as a practical guide to its subject. In the third edition only minor changes have been made, with the exception of the section on trench fever, which has been extensively rewritten, these changes of course being required by the newer war medicine researches.

Disease and the Odor Humanus.—The emanations from the skin vary with every passing phase of health, and in pronounced disease the altered smell may be easily noticeable. Inasmuch as all constitutional diseases are mirrored in the blood, and inasmuch as the cutaneous and respiratory emanations tend to alter with every alteration of the blood, it is probably no exaggeration to say that an all-wise physician with a sufficiently delicate sense of smell, could diagnose most (constitutional) diseases by the mere smell of his patient. But we have not arrived at that stage yet.—*Medical Press.*

Medicolegal

Duty of Employer Employing Physician for Employees

(Woody v. Carolina Spruce Co. (N. C.), 97 S. E. R. 610)

The Supreme Court of North Carolina says that the plaintiff and the defendant had entered into an agreement whereby the plaintiff was to pay out of his wages one dollar a month to the defendant, and, in consideration of this, the defendant agreed to furnish a competent physician to treat the plaintiff in case of sickness or injury. This regulation of the defendant applied to all its employees. The plaintiff averred that a Dr. Smith, the physician employed by the defendant, was unskilful and incompetent, and that when the plaintiff broke his right arm it was set by Dr. Smith and the president of the defendant, who was reported to have practiced medicine at one time, and that the operation was performed with such gross unskilfulness that the plaintiff was seriously and permanently injured. The defendant contended that the nonsuit granted should be sustained on two grounds: First, that there was not sufficient evidence to go to the jury that the doctor was an unskilled and incompetent surgeon, or, if he was, that the defendant knew of it or might reasonably have known of it; and, second, that if the doctor were unskilled, the plaintiff knew of that fact and, notwithstanding his full knowledge, as shown by his cross-examination, accepted his service, and was not permitted to complain of the defendant. But the evidence of two physicians tended to prove that the operation was very unskilfully performed and that the plaintiff suffered injury thereby. This of itself tended to prove incompetence on the part of those who performed the operation. There was also evidence that the defendant had knowledge, or facts sufficient to put it on inquiry, of Dr. Smith's incompetence and that, notwithstanding it, continued him in its service. Besides, there was evidence that the plaintiff, some time before he was injured, complained to the president of the company of Dr. Smith's incompetence, and when he was injured the president assured him that he and Dr. Smith were fully competent to perform the operation and that the plaintiff in submitting to the operation relied on such assurance, as he had a right to do. Viewing the evidence in this most favorable light for the plaintiff, as the court must do in cases of nonsuit, the court is of the opinion that the trial judge erred in granting a nonsuit; but should have submitted issues to the jury with appropriate instructions. The defendant was under no legal obligation to employ a physician to treat its employees; but, when it assumed to do so and to deduct a monthly sum from their wages for medical attention, it was under obligation to exercise due care in selecting the physician and in continuing him in its service.

Physicians Not Liable for False Imprisonment

(Springer v. Steiner et al. (Ore.), 178 Pac. R. 592)

The Supreme Court of Oregon reverses the judgment and dismisses the cause, in this action wherein the plaintiff obtained a judgment for $2,500 damages against two physicians, a Dr. Howard and a Dr. Holcomb, for alleged false imprisonment arising out of the plaintiff's having been confined in the county jail and then committed to the state insane asylum. The court says that, as to Dr. Howard, the evidence went only to the extent of showing that he believed the plaintiff insane, and tried to induce her to leave her association with a man who claimed to be a "New Thought Healer," whatever that may be, and whom Dr. Howard evidently considered a fraud and quack, and go to their home with Dr. Howard and his wife, who was the plaintiff's sister. He did not deny that he thought the plaintiff insane, but denied that he ever suggested she be sent to the asylum. He was not present, or in the city, when the proceedings were had in reference to her sanity, and there was absolutely no evidence that he even suggested or in any way participated in the proceedings. His motion for a directed verdict in his favor should have been allowed.

Nor was it claimed that Dr. Holcomb was the cause of the confinement of the plaintiff in the county jail, or of any treatment she received there. His connection began lawfully in obedience to a requirement of the county judge to examine the plaintiff as to her mental condition. There was no evidence as to what took place at the examination; but it appeared, independent of the certificate of the physician and the record made by the court, that there was an examination made, which the plaintiff was pleased to call a "farce," and there was the record made by the county court, which recited every jurisdictional fact concerning the examination. The objection was urged against this record that no warrant of arrest was issued by the court to bring the plaintiff before it for examination as to her sanity; and it was true that there was no record of the issuance of such a warrant, but it was also true that there was no provision of law requiring a warrant for that purpose. She was before the judge, and Dr. Holcomb and another physician were appointed to examine her as to her sanity, and on such examination she was duly adjudged insane.

The burden of proof was on the plaintiff to show, either that the physicians made no examination as to her condition, or that the certificate was maliciously false. Her opinion that it was a "farce" stated no probative fact. Her statement that no question was asked her in a 15-minute examination, which she admitted was made, which "tended to an examination of her mental condition," was another conclusion stating no fact on which a verdict could be founded. She testified that after her release from the asylum she had a conversation with Dr. Holcomb, in which he impliedly admitted that his certificate was based on information derived from the relatives. If such was the fact the jury would have a right to consider it in determining whether the certificate was negligently given, but not that it was given maliciously or in bad faith.

It must be remembered that this was not an action against Dr. Holcomb for malpractice in not using reasonable skill and diligence in examining into and diagnosing the plaintiff's condition. It was an action for negligently causing the plaintiff to be falsely arrested and imprisoned in the asylum. Whatever may have been the character of the examination (and the record made the county judge, who had general supervision over it, say it was "careful"), the defendant Holcomb did not and could not arrest or cause the plaintiff to be confined in the asylum. His examination and certificate would be utterly worthless in themselves to cause the confinement of the plaintiff. They were merely evidence (of a high order it was true) which the county judge might accept or reject. The court should have directed a verdict as to the defendant Holcomb.

Society Proceedings

COMING MEETINGS

Am. Assn. of Genito-Urinary Surgeons, Atlantic City, June 16-17.
Am. Assn. of Pathologists & Bacteriologists, Atlantic City, June 16-17.
American Association of Physicians, Atlantic City, June 16-17.
American Climatological & Clin. Assn., Atlantic City, June 14-17.
American Dermatological Association, Atlantic City, June 16-18.
American Medico-Psychological Assn., Philadelphia, June 18-20.
American Neurological Association, Atlantic City, June 16-18.
American Ophthalmological Society, Atlantic City, June 16-17.
American Orthopedic Association, Atlantic City, June 16-17.
American Otological Society, Atlantic City, June 16-17.
American Pediatric Society, Atlantic City, June 16-18.
American Psychopathological Association, Atlantic City, June 19.
American Society of Tropical Medicine, Atlantic City, June 16-17.
American Surgical Association, Atlantic City, June 16-18.
Congress American Phys. & Surgs. of N. A., Atlantic City, June 16-17.
Maine Medical Association, Portland, June 18-19.
National Tuberculosis Association, Atlantic City, June 14-17.
Nevada State Medical Association, Lake Tahoe, June 20-21.
New Jersey Medical Society, Spring Lake, June 24-25.
North Dakota State Medical Association, Grand Forks, June 24-25.
Southern Minnesota Medical Assn., Rochester, June 23-24.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Anatomy, Philadelphia

May, 1919, 25, No. 3

Postnatal Development of Suprarenal Gland; Effects of Inanition on its Growth and Structure in Albino Rat. C. M. Jackson, Minneapolis.—p. 221.

Relative Volumes of Cortex and Medulla of Suprarenal Gland in Albino Rat. J. C. Donaldson, Cincinnati.—p. 291.

Development of Lobule of Pig's Liver. F. P. Johnson, Columbia, Mo.—p. 299.

Histogenesis of Heart Muscle of Pig in Relation to Appearance and Development of Intercalated Discs. L. Witte, Lawrence, Kans.—p. 333.

American Journal of Ophthalmology, Chicago

May, 1919, 2, No. 5

Concussion and Contusion Injuries of Eye in Warfare. G. E. de Schweinitz, Philadelphia.—p. 313.

Activities of Division of Surgery of Head: Office of Surgeon-General. W. R. Parker, Detroit.—p. 319.

School of Ophthalmology, Medical Officers Training Group. M. Wiener, Cape May.—p. 322.

Refraction Methods Employed in Department of Ophthalmology of Attending Surgeon's Office, U. S. Army, Washington, D. C. J. R. Newcomb, Indianapolis.—p. 326.

Fundus Pathology with Red-Free Light of Vogt. R. Von Der Heydt, Chicago.—p. 334.

American Journal of Syphilis, St. Louis

April, 1919, 3, No. 2

*Standardization of Wassermann Reaction. III. Red Corpuscle Suspension: Preservation of Red Blood Cells. J. A. Kolmer and C. P. Brown, Philadelphia.—p. 169.

*Syphilis in Senility: Report of Case. U. J. Wile, Ann Arbor.—p. 193.

Prevalence of Syphilis as Found in Routine Coroner's Necropsies. R. L. Thompson, St. Louis.—p. 196.

Syphilis in Three Generations. Case Report. R. L. Ash, San Francisco.—p. 200.

Affections of Endocrine Glands in Acquired Syphilis. H. H. Hazen, Washington.—p. 205.

Secondary Syphilitic Periostitis of Mandible: Report of Case. L. B. Kingery, Ann Arbor.—p. 213.

Syphilis of Eye—Acquired Form. L. S. Greene, Washington, D. C.—p. 215.

*Alcoholic Argyll Robertson Pupils: Alcoholic Psychosis Simulating Neuro-Syphilis: Case Report. K. A. Menninger, Topeka, Kans.—p. 232.

Roentgenologic Diagnosis of Syphilis. M. J. Hubeny, Chicago.—p. 235.

Diagnostic Value of Lowered Bone Conduction in Syphilis. W. H. Goeckermann, R. A. Barlow and J. H. Stokes, Rochester, Minn.—p. 240.

*Cholesterinized Alcoholic Extract of Human Heart as Antigen in Complement Fixation Test for Syphilis. C. E. Roderick, Battle Creek, Mich.—p. 248.

*"Provocative" Wassermann Test. S. Pollitzer and L. Spiegel, New York City.—p. 252.

Wassermann Reactions Made in Serological Laboratory of City of Cleveland. E. E. Ecker, Cleveland.—p. 260.

*Colloidal Gold Reaction. P. G. Weston, Warren, Pa.—p. 266.

Course to Take in Presence of Doubtful Chancre. D. W. Montgomery, San Francisco.—p. 276.

Fight Against Venereal Disease in Extracantonment Zone About Camp Zachary Taylor. L. D. Fricks and S. Graves, Louisville.—p. 280.

*Treatment of Syphilis in Tuberculous Patients. J. A. Elliott, Charlotte, N. C.—p. 291.

Standardization of Wassermann Reaction.—Comparative studies of various methods for the collection and washing of blood and in the preparation of erythrocyte suspensions for this test were made by Kolmer and Brown. With the fresh blood of persons, sheep and oxen, the method of collection by defibrination or in an anticoagulating fluid, had no apparent influence on the red blood corpuscles so far as their suitability for hemolytic antigen in the Wassermann reaction is concerned. Human blood cells secured by breaking up coagulums in saline solution were slightly less resistant to serum hemolysis. The authors found that small amounts of blood are best collected in an anticoagulating fluid. They advise that fresh blood cells should be used. Ordinary physiologic saline solution proved as suitable for washing cells as Locke's, Ringer's and Locke-gelatin solutions. The numerical concentration of a corpuscle suspension varied according to the duration and speed of centrifugalization in the last washing and according to method of measuring the corpuscle mass; best results were secured by measuring the corpuscles in an accurately graduated centrifuge tube after the final washing. It was noted that variation in the numerical concentration of corpuscle suspensions may influence the results of serum hemolysis; for this reason the same hemolytic antigen must be used in the preliminary complement and hemolysin titrations as in the Wassermann tests, unless the suspensions are prepared with uniform accuracy. The fresh erythrocytes of different healthy persons and sheep were found quite constant in their resistance to serum hemolysis. The use of suspensions of corpuscles from different persons and sheep does not constitute a source of error in the Wassermann test if technical conditions are correct. Preserved blood may be used in the preparation of hemolytic antigen for the Wassermann test and for the immunization of rabbits, but fresh blood is always preferable. Preservation with liquor formaldehydi and saccharose solutions was found practicable for periods of two to four weeks; the liquor formaldehydi method is quite simple and to be preferred. Methods for preserving blood and a method for preparing the red corpuscle suspension for a standardized test are described.

Syphilis in Senility.—Since 1915 Wile has had four cases of syphilis in senility under observation and treatment. The ages of the patients were 60, 62, 64 and 79, respectively. Of these, all were genital infections, following coitus. Two were serious as evidenced by iritis in one, iridocyclitis, glaucoma and early central nervous involvement in the other. Three of the four persons, including the one aged 79, were sexually potent. The fourth acquired his infection during attempted intercourse, although he was impotent and had no libido. The oldest person, aged 79, was exposed in June, 1918. In October, a painless lesion appeared on the penis. Early in January a generalized eruption appeared on the body. The patient had no headaches and except for a glaucoma he felt perfectly well. The blood Wassermann reaction was four plus positive. Notwithstanding the negative clinical findings the spinal fluid showed 132 cells, marked increase in albumin and globulin and a four plus Wassermann reaction. The patient remained under observation about six weeks, during which time he received five injections of neo-arsphenamin, varying from 0.2 to 0.4 gram, and one injection of arsphenamin, 0.1 gram. He suffered no reactions and the local lesions disappeared entirely. After the first injection the iridocyclitis and glaucoma rapidly disappeared, and up to the time of his discharge no further eye symptom had manifested itself.

Alcoholic Argyll Robertson Pupils.—Menninger reports a case of the Argyll Robertson pupil and other reflex changes commonly associated with neurosyphilis in a patient not suffering from neurosyphilis, or from influenza, or from dementia praecox. The only demonstrated etiology was acute alcoholism. With the fixed pupils there was a speech defect, a paretic facial expression, tremulous tongue and hands, unequal knee and ankle jerks, and a rather defective memory. Altogether this made a fairly typical picture of "alcoholic pseudoparesis."

Antigen in Complement Fixation Test.—Roderick claims that cholesterinized alcohol human heart extract is probably the most sensitive antigen used in the complement fixation test for syphilis. In a small number of tests, its use results in a slight degree (10 per cent. or less) of inhibition, in cases not syphilitic. This antihemolytic tendency can be overcome by proper titration of complement. Roderick advises that cholesterinized human heart antigen should never be used alone, but controlled by an antigen less sensitive. It is especially valuable in the control of treatment, remaining positive for a considerable length of time after all other antigens are negative.

"Provocative" Wassermann Test.—In a series of about 150 cases of treated syphilis of all kinds, Pollitzer and Spiegel did not find a single clear case of a provoked reaction; while the assumption of a cure in all these cases was obviously untenable. In a series of cases temporarily negative, selected as probably not cured, the "provocative" test failed to indicate the presence of syphilis though the subsequent course of the cases proved that the syphilis was not cured. Therefore, Pollitzer and Spiegel regard the "provocative" arsphenamin injection as a useless and often misleading procedure.

Colloidal Gold Reaction.—Methods for making colloidal gold and directions for doing the test are given by Weston. The characteristics of a good gold solution are stated and the nature of the substance causing the reaction is discussed.

Treatment of Syphilis in Tuberculous Patients.—Elliott presents the data in ten cases treated with arsphenamin. His observations lead him to conclude that mercury should be used with great care in tuberculous patients, that the deleterious effect is not immediate, but appears several months after the institution of administration of the drug. Therefore, arsphenamin seems to be the drug of choice in such cases, but should be given in small doses and at long intervals, inasmuch as the ordinary dosage accentuates active foci and is prone to cause a flare up in latent lesions.

Archives of Internal Medicine, Chicago

May 15, 1919, 23, No. 5

*Clinical Significance of Blood Sugar in Nephritis and Other Diseases. J. R. Williams and E. M. Humphreys, Rochester, N. Y.—p. 537.

*Clinical Significance of Blood Sugar in Diabetes Mellitus. J. R. Williams and E. M. Humphreys, Rochester, N. Y.—p. 546.

*Tolerance and Rate of Utilization of Glucose in Individuals Exhibiting Various Degrees of Diabetes Mellitus. J. R. Williams and E. M. Humphreys, Rochester, N. Y.—p. 559.

*Epidemic of Influenza at Camp Merritt. F. M. Rackemann, Boston, and S. Brock, New York.—p. 582.

*Leukocytic Studies on Soldiers with Irritable Hearts. L. N. Gay, Lakewood, N. J.—p. 603.

*Influence of Fasting and Various Diets on Liver Injury Effected by Chloroform Anesthesia. N. C. Davis and G. H. Whipple, San Francisco.—p. 612.

Influence of Drugs and Chemical Agents on Liver Necrosis of Chloroform Anesthesia. N. C. Davis and G. H. Whipple, San Francisco. —p. 636.

Blood Sugar in Nephritis.—The average digestion blood sugar level in 113 normal individuals examined by Williams and Humphreys was 0.107 per cent., the values ranging from 0.07 to 0.14 per cent. The range of the blood sugar level in a series of sixty cases of miscellaneous diseases, chiefly gastro-intestinal disorders and pernicious anemia, excluding diabetes, nephritis and infections, was from 0.07 to 0.16 per cent., with an average of 0.115 per cent. In a series of nine cases of carcinoma there was a moderate elevation of blood sugar, 0.12 to 0.16 per cent. In a series of twenty-two miscellaneous infections, chiefly influenza, pneumonia, and streptococcus, the range was from 0.07 to 0.15 per cent., with an average of 0.11 per cent. In the early stages of nephritis, when the general metabolism of the body is but little disturbed, blood sugars, as a rule, are normal. In the last stages of nephritis, when the patient is in uremia, the blood sugar will be found very high, often equaling the severe stages of diabetes. Other important metabolic constituents of the blood will be found correspondingly increased, presenting a picture of complete metabolic failure. A third group of cardiovascular cases, characterized by high blood pressure and little or no evidence of renal disturbance, usually exhibits blood sugar levels slightly higher than normal. In severe cases of nephritis, patients may excrete small quantities of sugar in the urine, frequently giving rise to the misapprehension that true diabetes exists. In such cases the blood sugar level is inappreciably influenzed by carbohydrate restriction, and these patients should not be subjected to the discomfort of a rigorous diabetic diet Failure in nitrogen metabolism precedes, often by months, the rise in blood sugar, so that the latter has a rather serious prognostic omen.

Blood Sugar in Diabetes.—The blood sugar levels in 127 cases of diabetes were studied by Williams and Humphreys, fifty-six males and seventy-one females, making in all 1,106 blood sugar determinations. In their study of the renal threshold for sugar in diabetes, they found no constant blood sugar level for the appearance of urinary sugar. There is no striking relation between the height of the renal threshold and the duration of the diabetes. It would appear, however, from the analysis of sixty-five cases that the threshold tends to rise with the the increasing duration of the disease. Younger diabetics as a rule have low or normal thresholds. The threshold rises with advancing years. When the diabetes is mild or quiescent, the point at which the kidneys eliminate sugar is stationary; but when the disease becomes progressive, the threshold tends to rise. Before death the blood sugar renal threshold may reach great heights with little or no sugar appearing in the urine. A rising renal threshold for sugar in the face of careful dietary treatment is a serious prognostic sign. A high renal threshold for sugar in mild diabetes under proper dietary regulations usually indicates some complication, such as arterial hypertension. A high renal threshold for sugar may mean a physiologic expedient to conserve food material. The authors believe that persistent high blood sugar levels promote exhaustion and rapid decline of function, and the high threshold is merely a safety measure. In severe diabetes, where extremely low diets are necessary to maintain life, the high threshold is essential to take care of the seriously impaired carbohydrate metabolism. In the treatment of diabetes it is desirable to main the blood sugar level as nearly normal as possible, even though severe restrictions in diet may be necessary for this purpose, notwithstanding the fact that the high threshold will permit of a much more liberal diet without the appearance of sugar in the urine. The authors believe that diabetes should be controlled on the basis of the blood sugar level rather than by urine tests. A persistent low blood sugar level may be regarded as an extremely favorable sign. A persistent high blood sugar level, in spite of undernutrition, usually points to an unfavorable outcome. In their experience, cases which hitherto had been intractable and had shown progressixe loss of food tolerance, when the blood sugar level was disregarded, have been greatly benefited and their tolerance increased by regulating the food intake so as to insure, when possible, a normal blood sugar level. While they regard 0.15 per cent. as the maximum normal digestion blood sugar level, they believe patients are safer when this level is not higher than 0.13 per cent.

Glucose Tolerance in Diabetes.—Williams and Humphreys endorse the glucose tolerance and utilization test proposed by Hamman and Hirschman and as later modified by Janney as a means of differentiating those metabolic disorders in which traces of reducing substance are excreted in the urine from renal diabetes and mild diabetes mellitus. As a means of measuring the degree of disturbance in carbohydrate metabolism in hyperthyroidism and other endocrinal disorders, they have found it to be much superior to tests depending solely on the determination of urine sugar. Renal diabetes is a definite physiologic disturbance, easily distinguishable by this procedure from true diabetes. The sugar tolerance and utilization test is particularly useful in differentiating those cases of very mild diabetes in which there are exhibited no clinical symptoms of the disorder. The various degrees of failure of carbohydrate metabolism in the more evident cases of diabetes are most strikingly shown by this method.

Epidemic of Influenza at Camp Merritt.—Of 4,979 cases of influenza treated at the Camp Merritt Base Hospital, 1,015 patients, or 20.4 per cent., developed bronchopneumonia, and of these latter, 31 per cent. died—a mortality for all the admissions of 6.3 per cent. The average time of onset of bronchopneumonia was 4.03 days in a series of 726 recovered cases, and 5.7 days in a series of forty-seven fatal cases. The temperature, pulse and respiration curves differed in the fatal and recovery patients. The fatal cases had a short course; in a series of thirty-nine such cases the duration of the pulmonary involvement averaged only 4.7 days. The temperature curve seldom assumed the sustained plateau so common in lobar pneumococcus pneumonia, but was rather of an irregular, remittent type, ranging from 99 to 105 or even to 107 F. Of greater value than either the temperature or the pulse was the respiratory rate, which was always raised. A climb in the rate, sometimes precipitous, usually more gradual, presaged death. The systolic blood pressure was normal in the acute stage of the disease, the diastolic was at times often as low as 55. In the cases of primary influenzal bronchopneumonia the average leukocyte count was low (5,000 to 15,000 cells per c. mm.). The presence of the hemolytic streptococcus tended to increase this average count but slightly, although the individual counts varied from 5,000 to 30,000 or even higher. Several cases were observed with counts below 2,000 cells, all of which were fatal. In a small series of these bronchopneumonia cases the coagulation time of the blood was determined and found normal. The urine showed, as a rule, a trace of albumin with granular and hyaline casts. Treatment was purely symptomatic, although stress was laid on keeping the intake of total fluids as great as possible. Digitalis, camphor and occasionally strychnin were used in an attempt to control the rising pulse rate; they seemed at times to be effective. When the patient was unable for any reason to take fluids well and became "dried up," with dry tongue and skin, tap water was given by rectum, and in a few cases salt solution (always made up with freshly distilled water) was injected intravenously in daily doses of 500 c.c. each. The results from the use of vaccines were unsatisfactory. Rackemann and Brock are of the opinion that all fatal cases develop "bronchopneumonia" before death, and that this "bronchopneumonia" is but a later manifestation of pure influenza, because: first, the lung signs develop in many cases during the primary influenza; second, the pathologic picture of the lungs in influenzal bronchopneumonia is distinctly characteristic, being quite unlike the picture seen in other forms of pneumonia.

Leukocytes in Irritable Heart Cases.—A slight leukocytosis was found by Gay in the unclassified group of patients with "irritable heart." The figures correspond to those found in patients with organic heart disease. There is a relative lymphocytosis, the limits being between 15 and 51 per cent. An eosinophilia is likewise present. A marked leukocytosis occurs in both patients and controls after the injection of epinephrin. This increase is much greater in the patients with positive reaction than in the controls, who did not respond to the drug. The morphologic studies of the blood in cases of "irritable heart" showed nothing of significance that might assist in the diagnosis.

Effect of Fasting and Various Diets on Liver Injury.—When chloroform anesthesia is indicated, Davis and Whipple advise giving liberal amounts carbohydrates and milk for at least two days preceding the anesthesia. They emphasize strongly that it is dangerous to give chloroform to man or animal whenever a fasting period has preceded the administration of the anesthetic.

Boston Medical and Surgical Journal

May 29, 1919, **180**, No. 22

Ten Years' Experience with Medical Defense Act. G. W. Gay, Boston.—p. 597.

Case of Thyroglossal Tract Fistula. W. C. Allen, Chicago.—p. 601.

Epidemic Work at Boston City Hospital. G. L. Farmer and J. Schoenfeld, Boston.—p. 605.

Influenza as Factor in Precipitating Latent Psychoses and Initiating Psychoses; History of Disease and Analysis of Cases. A. F. Harris, Worcester.—p. 610.

Hysteria in Male as Defense Reaction. Case Report. K. A. Menninger.—p. 612.

Journal of Nervous and Mental Diseases, New York

January, 1919, **49**, No. 1

Experimental Studies of Optic Thalamus and Corpus Striatum. F. S. Rogers, Chicago.—p. 1.

Case of Pseudosclerosis Associated with a Psychosis. J. A. Jackson and S. L. Immerman, Philadelphia.—p. 5.

*Cerebellar Gait. I. L. Myers, Chicago.—p. 14.

Cerebellar Gait.—Graphic records of the cerebellar gait made by Meyers seem to indicate that there is no asthenia (Luciani) in the muscles affected by the cerebellar lesion nor is there any arrhythmia in the sense that Luciani employed that term. There is no difference from the normal in the force with which the flexed and advancing limb returns to the vertical on the ground so that the height of the line is the same in the affected as in the normal limb. The primary essential effect of the cerebellar lesion is the change in the rhythm of the affected limb with relation to the corresponding limb on the normal side, the change exhibiting itself in the hyperactivity of the extensors so that the former limb extends and initiates the step too early as compared with the same action of the latter limb.

February, 1919, **49**, No. 2

*Lesion in the Putamen. I. Newmark, San Francisco.—p. 97.

*War Trauma of Spinal Cord. L. Grimberg, U. S. Army.—p. 115.

Blood Urea Nitrogen in Catatonia. W. C. Rappleye, Foxboro, Mass.—p. 130.

Lesion in Putamen.—Newmark cites the case of a man, aged 65 years, who after having experienced a transient disturbance of articulation some time before, suffered a slight impairment in the use of the left extremities, which appeared to him as a numbness or awkwardness in the action of the left hand and a loss of facility in moving the left foot toes, and was associated with a slight tremor of the left hand on voluntary movement and of the lid when he shut the left eye. In the remaining two and a half years of the patient's life no further progress in the affection of the extremities was observed, but about one year and a half before his death paralysis of the bladder and weakness of the anal sphincter supervened. There was no Babinski sign or involvement of the pyramidal tracts, and all the tendon reflexes were normal, but the record contains no mention of the abdominal or cremaster reflexes. Subsequently lymphatic leukemia was noted, and of this disease the patient died. At the necropsy a lesion was found in the putamen resembling in many particulars what Wilson described as progressive lenticular degeneration.

War Traumas of Spinal Cords.—Grimberg contends that an injury to the spinal cord alone does not exist; that the trauma must be conceived as a root and cord trauma. War traumas of the spinal cord are nearly always associated with edema or hemorrhages which may clear up in the course of the disease and change the entire clinical picture.

March, 1919, **49**, No. 3

Rôle of Focal Infections in Psychoses. H. A. Cotton, Trenton, N. J.—p. 177.

Sex Expression of Men Living on Lowered Nutritional Level. W. R. Miles, Boston.—p. 208.

April, 1919, **49**, No. 4

*Second Attack of Poliomyelitis After Interval of Fifteen Years. F. D. Francis and W. F. Moncreiff, Chicago.—p. 273.

Study of Cerebrospinal Fluid in Different Periods of Syphilis. G. Cornaz, Lausanne, Switzerland.—p. 282.

*Influence of Alcoholism in Production of Hallucinations in General Paralysis of Insane. S. L. Immermann, Philadelphia.—p. 289.

Second Attack of Poliomyelitis After Fifteen Years' Interval.—The patient in this case was a girl, aged 18 years. When 3 years of age she had an attack of acute anterior poliomyelitis with febrile state, paralysis of both upper extremities and transient weakness of both lower extremities. Several months after this attack almost complete recovery of the left upper extremity had taken place and on the right side there was a partial return of function with, however, a well marked residual paralysis of the deltoid, forearm supinators and all the intrinsic muscles of the hand. At the age of 18, the patient complained of general malaise, weakness, especially of the lower extremities and inability to stand or walk. The onset ten days previously was rather insidious with general malaise and pain in the lumbar region and lower extremities which came on following gymnastic exercises. Associated with this was a mild febrile syndrome and a catarrhal rhinopharyngitis which continued for four or five days. On the eighth day after the onset she rather suddenly lost power in the lower extremities so that she could neither walk nor stand. Paralysis of the left lower extremity was complete; of the right only partial. The clinical course was comparatively uneventful. There was no fever after the third day. When the patient left the hospital four weeks after admission the function of the involved muscles was but slightly improved. Six months later there was definite improvement, perhaps 15 or 20 per cent.; the lost function of the lower extremities was regained.

Alcoholism and Hallucinations of Insane.—In a study made by Immermann of seventy-three paretics, the patients fell into several clinical groups which tended to remain fairly distinct. Hallucinations were found to occur in certain of these groups and tended to remain confined to those groups. Excessive alcoholism occurred in only some of the hallucinatory groups, and was at most an indirect factor in the production of hallucinations. Some paretics showed a conspicuous absence of hallucinations; certain manic types showed hallucinations and a high incidence of excess of alcohol use, abnormal make-up and absence of knee jerks, but other hallucinatory patients did not show this combination.

New York Medical Journal

May 31, 1919, **119**, No. 22

What Constitutes an Intoxication Beverage? C. P. Sherwin, New York.—p. 925.
Alcohol and the Individual. A. A. Brill, New York.—p. 928.
Psychologic Aspects of Alcoholism. L. P. Clark, New York.—p. 930.
Alcohol in Some of Its Social Compensatory Aspects. S. E. Jelliffe, New York.—p. 934.
Allen Method of Treatment of Diabetes. W. C. Ward, Lynn, Mass.—p. 936.
Clinical Picture of Streptococcus Viridans Infection. H. F. Wolf, New York.—p. 938.
Douching Nose in Children. W. A. Hitschler, Philadelphia.—p. 942.
Symptom Complex Complicating Acute Mastoiditis. J. C. Keeler, Philadelphia.—p. 944.
Prophylaxis and Treatment of Influenza. L. T. deM. Sajous, Philadelphia.—p. 945.

Southern Medical Journal, Birmingham, Ala.

May, 1919, **7**, No. 5

Epidemic Encephalitis. W. C. Allen, Chicago.—p. 231.
Diagnosis and Treatment of Achylia Gastrica. H. W. Soper, St. Louis.—p. 235.
*Functions of Thyroid. J. P. Stewart, Attalla, Ala.—p. 238.
Treatment of Tumors of Upper Jaw with Cautery. J. C. Bloodgood, Baltimore.—p. 248.
Surgical Procedure in Evacuation Hospitals. H. P. Cole, Mobile.—p. 257.
Diagnosis and Treatment of Abdominal Pain. M. S. Davie, Dothan, Ala.—p. 259.
Tonsillectomy; Indications and Contraindications. T. A. Cheatham, Jr., Birmingham.—p. 267.
Conservation of Vision. W. S. Sims, Jackson, Miss.—p. 273.

Functions of Thyroid.—That pellagra was due to the lack of the proper function of the thyroid is the theory advanced by Stewart. He reports five cases treated successfully with thyroid extract and sodium cacodylate. Twenty-eight patients in all have been treated successfully by this plan.

Wisconsin Medical Journal, Milwaukee

May, 1919, **17**, No. 12

Medicolegal Cases Involving Question of Insanity. R. Dewey, Wauwatosa.—p. 473.
Tuberculosis—Medical Specialty Through Popular Demand. G. T. Palmer, Springfield, Ill.—p. 476.
Psychology of Refraction. M. P. Andrews, Beloit.—p. 478.
Case of Sarcoma of Nose. S. G. Higgins, Milwaukee.—p. 482.
Trachoma. C. G. Dwight, Madison.—p. 485.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Archives of Radiology and Electrotherapy, London

April, 1919, **23**, No. 11

Stereoscopic Roentgenography. J. M. Davidson.—p. 340.
Gunshot Wounds of Chest. P. T. Crymble.—p. 346.
Technic of After-Treatment of War Injuries by Radium. W. C. Stevenson.—p. 356.
Farm Work as Cure for Sequels of Wounds: Substitution of Natural Physiotherapy for Artificial Physiotherapy. J. Bergonie.—p. 362.

Edinburgh Medical Journal

May, 1919, **22**, No. 5

Experiences of Consulting Physician on Duty on Palestine Lines of Communication. F. D. Boyd.—p. 276.
A Field Ambulance in Gallipoli, Egypt, Palestine and France. J. Young.—p. 288.
*Two Cases of Arteriovenous Aneurysm of Popliteal Vessels. F. C. Pybus.—p. 315.

Two Cases of Arteriovenous Aneurysm of Popliteal Vessels.—Both of Pybus' patients were shot through the calf, the bullet making a clean entry and exit. In both cases the popliteal artery and vein were damaged, leading to an arteriovenous aneurysm. Swelling and pulsation of the calf were present in each. Exploration revealed damage to both main vessels of such a character that repair was impossible, and in such a position that simultaneous ligature of the popliteal, anterior, and posterior tibial arteries and their corresponding veins was necessary to control bleeding. In both cases recovery ensued without any loss of vitality of the distant portions of the limb and with full functional use.

Journal of Tropical Medicine and Hygiene, London

May 1, 1919, **22**, No. 9

*Results of Vaccine Treatment in Filarial Lymphangitis in British Guiana. F. G. Rose.—p. 81.
*Epithelial Xerosis of Conjunctiva in Natives of the Sudan. R. G. Archibald.—p. 81.
Trichophyton Currii. A. J. Chalmers and A. Marshall.—p. 83.

Vaccine Treatment of Filarial Lymphangitis.—Having demonstrated a streptococcus in cases of lymphadenitis and lymphangitis, Rose has been experimenting with a vaccine prepared from streptococci isolated from these conditions, and he now reports on the progress which has been made with this method of treatment. After extended trial he has arrived at the conclusion that the most effective method of giving inoculations was in a series of three, the first inoculation consisting of 100 million dead cocci and the next two of 200 million, an interval of two weeks separating the inoculations. The reactions following the inoculations are almost invariably mild, and the doses may be doubled in longstanding cases. With this vaccine, Rose has inoculated sixty persons more than six months back, nineteen of these cases being of fairly long standing—that is to say, all longer than one year, and some two or three years or more since the first attack, the rest being recent cases. Of these nineteen patients, nine patients have had no recurrences since inoculation, while the others have had attacks varying in frequency and intensity; but most are positive that the attacks have grown milder in character. Of the forty-one recent cases, thirty patients were inoculated a year ago or earlier, and none has had a single attack since. Of the other eleven, three cannot be traced; two remained free for over a year, while the remaining six were done six months ago, and have had no recurrence yet.

Epithelial Xerosis of Conjunctiva.—In three cases of epithelial xerosis of the conjunctiva observed by Archibald, diphtheroid bacilli allied to the *B. xerosis* group were present in the xerotic areas. Experimental inoculation with material obtained from one of the cases produced xerosis of the conjunctiva in a rabbit.

Lancet, London

May 10, 1919, **2**, No. 19

*Missiles as Emboli. J. Bland-Sutton.—p. 773.
*Continued High Maternal Mortality of Childbearing. V. Bonney.—p. 774.
Treatment of Malaria among British Troops. R. Ross.—p. 780.
*Influence of Malaria on Wassermann Reaction. J. G. Thomson and C. H. Mills.—p. 782.
*Variations in Results of Successive Wassermann Tests: Clinical Application of Data. C. H. Browning and E. L. Kennaway.—p. 785.
Complement Fixation Test in Gonococcal Infections. A. H. Priestley.—p. 787.
*Some Forms of Irritable Heart. I. Harris.—p. 787.
*Persistence of Cerebrospinal Fever Cases as Carriers of Meningococcus During Convalescence. E. Embleton and G. H. Steven.—p. 788.
Subacute Trench Fever. J. H. Lloyd.—p. 791.
*Lacrimal Gland Secretion in Surgical Anesthesia. L. T. Rutherford.—p. 792.
Rectal Ether Anesthesia. J. C. Clayton.—p. 793.

Missiles as Emboli.—Sutton cites cases which prove conclusively that missiles occasionally become dangerous emboli. A soldier died after being wounded in several places, including the arm, chest and knee. There was a hole in the right side of his chest, in the right leaf of the diaphragm, and in the inferior vena cava 2.5 cm. below the place where the hepatic vein joins the caval vein. A flat piece of shrapnel, 2 cm. square and 12 mm. thick, lay in the right ventricle of the heart. There was no wound of the heart. The piece

Milian reports a case in which the symptoms of a fulminating lethargic encephalitis developed as the young woman was convalescing from influenza.

Acromegaly and Diabetes.—Labbé's patient, a miner of 48, has hypertrophy of the pituitary, also acromegaly, while at the same time he presents symptoms of diabetes, but there is no wasting away and pituitary treatment displayed no action on the polyuria. The glycosuria, however, was remarkably influenced by pituitary treatment, plus reduction of intake of carbohydrates, the sugar in the urine dropping from 129 gm. to zero in four months. The case seems to confirm the assumption that not the pituitary itself, but irritation of some center in the base of the brain is responsible for the diabetes and the polyuria.

Diabetes with Insufficiency of the Pancreas.—Faroy relates that the pancreas digestion had been interrupted in a man of 58 to a degree suggesting cancer of the pancreas or ampulla of Vater, but the absence of jaundice and of pain during the two years excluded malignant disease. Continuous thirst, insatiable appetite, polyuria and 140 gm. of sugar in the twenty-four hours had preceded the digestive disturbance. Under a course of pulverized pancreas treatment the digestion and stools returned to clinically normal, but the diabetes was not modified by it in the least. Thus, the external secretion of the pancreas was favorably modified or supplemented, while the internal secretion was not influenced.

Anomalous Spinal Fluids.—Lochelongue discusses the paradoxical findings in some among 250 specimens of cerebrospinal fluid examined. Abnormally small amounts of ash, as also lymphocytosis, are encountered in bacterial meningitis with a subacute course. A small amount of ash with a clinical picture suggesting acute disease is evidence of an acute infection superposed on a slow meningeal infection or an exacerbation of some previously latent infection. One case confirms the opinion that, even with pronounced polynucleosis, a high sugar content excludes bacterial meningitis unless, on account of diabetes or traumatism, the sugar content previously had been extraordinarily high. He also emphasizes the possible differential importance of his constant finding of an abnormally high sugar content at the time of an epileptic seizure. In one case of poliomyelitis in a young man, he found 0.45 gm. albumin; 1.20 gm. sugar, and 0.52 gm. urea in the spinal fluid.

Journal d'Urologie, Paris

May, 1919, **7**, No. 5-6

Factitious Disease of Urinary Apparatus. Escat.—p. 481.
*Appendicitis as Complication of Movable Kidney. S. Rolando.—p. 497.
War Recto-Urethral Fistulas. R. Le Fur.—p. 503.
Treatment of Gonorrhea in Wartime. Carle.—p. 523; C. Gauthier.—p. 529.
Urinary Stones in the Military. F. Cathelin.—p. 531.
*Enrichment Method for Tubercle Bacilli in the Urine. M. Vivier.—p. 537.
*Plastic Induration in Corpora Cavernosa. Corbineau.—p. 543.
Congenital Fistula in Dorsum of Penis. Ehrenpreis.—p. 585.
Hernia of Bladder Containing a Stone. Rougier.—p. 587.
Kidney Shattered by Projectile; Recovery after Nephrectomy. H. Mondor.—p. 590.
*Incarceration of Penis in Metal Ring. Fonseca.—p. 595.
Urethra with Three Meatus. A. Boeckel.—p. 598.

Appendicitis as Complication of Movable Kidney.—Rolando objects to the statement that appendicitis is a frequent accompaniment of movable kidney. In his own experience with twenty-five cases of right nephropexy for movable kidney he found signs of appendicitis only in three cases. In the single case of unmistakable acute appendicitis, the kidney disturbances were of many years' standing, while the appendicitis had only developed recently.

Enrichment of Tubercle Bacilli in Urine.—Vivier comments on the rapidity, simplicity and reliability of the Ellermann-Erlandsen method for enrichment of the tubercle bacilli in the urine by centrifuging for twenty minutes, diluting in 5 or 6 c.c. of a 1 per four hundred solution of sodium carbonate, and incubating for twenty-four hours at 37 C. After this they centrifuge anew for twenty minutes, decant and dilute the sediment in 5 or 6 c.c. of a 1 per four hundred solution of sodium hydroxid. Then heat in the water bath to boiling for five minutes, and centrifuge anew. The staining can be done by the Spengler technic. All the cellular and bacterial débris except the tubercle bacilli are destroyed by these measures and the diagnosis can be made at once without waiting for inoculation of animals.

Plastic Induration of the Corpora Cavernosa.—Corbineau has compiled 188 cases from the literature and reports a case personally observed in which one or more small lumps, like cherry stones, developed in the corpora cavernosa. He tabulates the details of the entire 189 cases with four pages of bibliography; the description of the first case dates from 1743. Medical treatment rarely gives results, and then only incomplete. Surgical removal of the lumps may be called for if they cause appreciable disturbance, but it is useless to attempt it until the induration has reached its complete development. Radium treatment has never been applied in any case to date, to his knowledge.

Removal of Incarcerating Metal Ring.—Fonseca gives an illustration of forceps with a circular saw in one blade. It can be run by a thumbscrew. The other blade is narrow and flat, and is slipped inside the incarcerating ring, where it serves as a bed for the saw as it cuts through the ring.

Lyon Chirurgical

November-December, 1918, **15**, No. 6

*Bacteriologic Index for Suture. P. Piollet and others.—p. 677.
*Chemical Index for Suture. W. Mestrezat.—p. 698.
*Primary Suture of Infected Wounds. M. Audibert and P. Convert.—p. 718.
*Primary Suture in Stages. R. Leriche.—p. 723.
Treatment of Old Bone Fistulas. A. Chalier.—p. 732.
Operating under Screen Control. T. Nogier.—p. 740.
*Torsion of Displaced Spleen. P.-A. Petridis.—p. 747.
Femoral Aneurysm. G. Bolognesi.—p. 760.
Preferable Means for First Immobilization of Fractures. J.-P. Lamare.—p. 767.
Tardy Tetanus after Amputation. J. Perret and M. Bernheim.—p. 785.

Indications for Secondary Suture.—Piollet and his coworkers reiterate that even secondary suture after a war wound without fracture gives much better functional results than when the wound is allowed to heal spontaneously, and should be applied to all clinically sterile wounds even if bacteriologic examination is impracticable. The coexistence of the streptococcus and the staphylococcus gives the least favorable conditions for the success of the suture, but one alone does not always prevent healing by primary intention.

Chemical Index of Fitness of Wound for Suture.—Mestrezat asserts that it is possible from the chemical findings in the secretions of the wound to estimate with some degree of accuracy the organic defense that is being offered to infection. The serous fluid that had soaked into the dressings was systematically examined in some cases and the content in chlorids, albumin, and the proteolytic capacity, etc., were recorded over long periods and compared with the state of the healing process. The test found most instructive was what he calls the formaldehyd index or suture coefficient. It indicates practically the putrescibility of the secretions of the wound, that is, the percentage of the proteolytic nitrogen (ammonia, amino acids) found in the 100 c.c. of water in which the used dressings have been soaking for half an hour. He calls it the *azote de protéolyse titrable au formol* test, and describes the simple technic. His tabulations of the findings in large numbers of cases show the rise and fall of the index parallel to the clinical conditions in the wound. The ease and rapidity with which this simple and inexpensive test can be applied justify its use on a large scale as an instructive guide, other things being equal.

Primary Suture with Infected Wounds.—The results of primary or delayed primary suture of clinically infected wounds were surpassingly good in the 395 cases reviewed, even although sometimes the wound had to be opened and excision done during the secondary period.

Primary Suture in Stages.—Leriche reports most excellent results in extremely extensive war wounds sutured in three stages, the deeper layers first, then the middle layer and finally the skin, allowing an interval of two days between each. He declares that the results are as perfect as with primary suture, while it permits suturing many wounds which otherwise would forbid suturing.

Torsion of Spleen.—Petridis gives colored plates of the spleen removed from a young man which showed the effects of torsion and of a cancerous growth on the upper pole. The downward displacement of the spleen had brought the lower margin below the pubis. In a second case the spleen had sagged into the right iliac fossa and adhesions connected it with the appendix. This patient was a woman of 32, and the spleen was twisted twice on its axis, and had dragged down the end of the pancreas. Both patients recovered after splenectomy.

Paris Médical

April 19, 1919, **9**, No. 16

*Rachitis. M. Vargas (Barcelona).—p. 309.
*Typhus. G. Heuyer.—p. 318.

Rachitis.—Vargas reiterates that rachitis is a national problem in nearly every country. It is a world scourge, preventing the normal development of the young, leaving them damaged not only in their bones, but also in their mental and moral faculties. He expatiates on the prodromic symptoms which, when heeded, permit the removal of the causes. This prodromic stage includes the period from the first signs that the child is not thriving normally to the manifest deformity in the skeleton, evident in the skull during the first six months of life and in the fifth and sixth ribs in infants from 6 to 20 months old. The child whimpers when it is moved, the scalp sweats freely, the head is swung from side to side as soon as it touches the pillow and digestion is imperfect. A waxy pallor is one of the earliest symptoms, and the hemoglobin percentage is low. The very first sign of rachitis is a special constipation. The feces are hard; the rectum is unable to expel the lump and it sticks in the anus until aided by mechanical means. There may be fissure of the anus and prolapse of the rectum. Other signs of rachitis soon follow. The constipation may alternate with diarrhea, but in both types of stools the content in calcium salts is above normal. The eruption of the teeth and walking are retarded, proportional to the age at which the rachitis develops.

In the second stage the disease, which commenced with the blood, attacks the blood-producing organs, the bone marrow in particular. The resulting abnormal conditions in the marrow and cartilage make their effects felt in the development of the bone. But other organs are affected likewise, the nervous system, the muscles, skin and mucous membranes, as Vargas describes in detail, defining rachitis as a "toxic, infantile dystrophy characterized by hemolysis, irritability of the blood-producing system and by osteism." The tendency in time is to a spontaneous recovery, but the damage from it can only be warded off by removing the cause. For this he gives calomel in case the stomach is out of order, restricting the diet to milk alone, and aiding digestion with hydrochloric acid and pepsin. When the condition has improved under this and the digestion permits, he gives one or two drops of 10 per cent. phosphorized oil. Cleanliness, out of door air, possibly the seashore, complete the cure. He has never witnessed any benefit from epinephrin, bone marrow or thymus extract.

Typhus.—Heuyer enumerates the various differential signs in typhus, calling attention in particular to the rigidity of the rectus muscles in the portion reaching from the ribs to the umbilicus, and also to the pain on pressure of the external margin of the rectus muscles at a point where the muscle is crossed by a line passing from the umbilicus to the anterior angle of the tenth rib. On the right, this angle of the tenth rib corresponds to Flemming's point for bladder disease. The painful point in typhus thus cannot be confused with Flemming's point above or McBurney's point below. Pressure on this point causes the patient to grimace, and there is also a vasomotor reflex in the face, which grows red and sweats when the two points above and near the umbilicus are pressed. The cerebrospinal fluid also shows characteristic changes, leukocytosis, high pressure and high albumin content. The polynuclears predominate during the acute phase, and then the reaction is a lymphocytosis. Lumbar puncture usually relieves the headache and tranquilizes the patient.

Presse Médicale, Paris

April 28, 1919, **27**, No. 24

*Spinal General Anesthesia. V. Riche.—p. 225.
*Traumatisms of the Wrist. H. Colleu.—p. 226.

Spinal Anesthesia.—Riche says that he has applied general rachianesthesia *par la voie lombaire* in 60 cases out of a thousand in which he has used ordinary spinal anesthesia. The latter permits all operations under the diaphragm, but with a modified Jonnesco and Le Filliatre technic he performed operations on the neck, chest and arms. In 3 of the cases there was a tendency to partial narcosis, but most of the time the patients were able to converse with the nurse in charge. In 30 per cent. of the cases there was transient retching from twenty to thirty minutes after the injection. With his modified technic, the dose of procain (novocaine) was 1 cg. per 5 kg. of the body weight. The puncture is made in the first or second lumbar interspace, the patient lying on his side, withdrawing 10 or 15 c.c. of the spinal fluid. Then the anesthetic in an 8 per cent. solution is very slowly injected. He never uses epinephrin with it, but in the course of the injection he draws some of the spinal fluid up into the syringe several times to mix it well with the anesthetic. He declares that this technic can compete on an equal footing with general anesthesia and blocking the trunk nerve, but local anesthesia is preferable to all other technics when conditions permit it.

Traumatisms of the Wrist.—Colleu gives an illustrated description of the types of traumatism most often encountered, and expatiates on the frequent misinterpretation of the findings. This is due to lack of thorough clinical examination before applying radioscopy. The findings with the latter may otherwise prove misleading. The principal injuries encountered are fracture of the radius or of the scaphoid bone, partial rupture or tearing loose of some of the ligaments of the carpus, with or without dislocation of the bones of the carpus.

Progrès Médical, Paris

Jan. 25, 1919, **34**, No. 4

*Reconstructing Fractured Bone with Aid of Metal Clips. A. Aimes.—p. 29.
The Present Tendencies in Treatment of Abortion. P. Convert and H. Vignes.—p. 30.
Antiserum Treatment of Typhoid. L. Barras.—p. 32.

Feb. 1, 1919, **34**, No. 5

Treatment of Purulent Pleurisy by Siphonage, Progressive Sterilization and Secondary Suture. M. Barbier.—p. 39.
Differential Diagnosis Between Cancer and Tuberculosis of the Testicle. F. Cathelin.—p. 40.

Reconstruction of Fractured Bone.—Aimes discusses the drawbacks of different methods of osteosynthesis, and describes with illustrations a technic which he regards as superior to others. A light, narrow metal bar pierced with a strip of holes is laid along the bone, and over this are placed a row of narrow elastic clips, shaped like a capital C, with a small peg in the center which fits into one of the perforations in the bar. Each end of the clip is bent in and pointed to make a small claw which holds firm to the bone. Even in a case of submalleolar fracture the clips held the bones in perfect position for repair.

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 19, 1919, **49**, No. 16

*Problems of Kinesitherapeutics. R. Scherb.—p. 513.
*"Turgidization" of the Placenta. E. Frey-Bolli.—p. 528.
Surgical Complications of Influenza. J. Dubs.—p. 538.
Specific Elimination of Certain Drugs Through the Lungs. J. Ries and M. Ries-Imchanitzky.—p. 543.

Mechanical Orthopedics.—Scherb discusses the drawbacks and limitations of present methods of mechanical training of impaired function, and enumerates a number of principles which have hitherto been neglected in this work. He is the director of a national institution for training crippled children, and his experience has enabled him to devise means to combat each special form of motor disturbance and to persisted unmodified in all but one case. In two of the other cases, the retina in the other eye became detached at the fourth or sixth month of a later pregnancy. But artificial delivery at once in both cases was followed by the restoration to place of the retina, with recovery of reading vision. All these cases seem to teach that the longer the interval between the detachment of the retina and the delivery, the smaller the chance of restoration of the retina to place. Consequently it is extremely important to interrupt the pregnancy at once.

Fracture of the Long Bones.—Haugseth analyzes the present findings in 145 cases of fractures of the legs treated at the Rikshospital between 1907 and 1917, mostly industrial accidents.

Juvenile Deforming Arthritis.—In Nicolaysen's case the lad of 17 had been operated on a year before for arthritis deformans and subluxation of the femur head. The limping had been much improved by the intervention, and there was no further pain. After sudden death ascribed to the status lymphaticus and hypertrophied heart, the hip joint showed changes which rendered it probable that typical Calvé-Perthes' disease had preceded the juvenile deforming arthritis. The Calvé-Perthes' disease had induced a certain deformity in the joint, the head was egg-shaped, the neck short and broad, and this had modified static conditions in the joint and brought on the arthritis as the bone became fully ossified at puberty.

Retention of Urea with Kidney Disease.—Scheel reviews 25 cases of acute hemorrhagic or chronic nephritis, terminating in recovery or material improvement. There was retention of urea in both blood and spinal fluid, but it was never over 1.94 per thousand, and it displayed a downward tendency. In another group of 19 cases the urea content was over 2 per thousand, and the cases all terminated unfavorably in a few months or weeks. With over 4 per thousand, death is imminent within a few days. At the same time, low urea content is not inevitably a sign of good prognosis, as even with normal content, uremia may develop within a few months, with content up to 1 per thousand, within a few weeks. The highest retention was with chronic glomerular nephritis and true contracted kidney. The retention of urea is independent of the tendency to dropsy. There is usually a high blood pressure with retention of urea, but they are independent of each other and either may occur alone. Headache, anorexia and vomiting in the course of the chronic nephritis should attract attention, but they are less reliable as elements for the prognosis than the objective retention of urea.

His experience suggests further that eclampsia with and without uremia may be two separate entities. Bruun of Stockholm recently called attention to the difference between the residual nitrogen in the spinal fluid and in the blood in these two groups. The difference may amount to 16 mg. per 100 c.c. blood serum, in the normal, but the difference is greater with nephritis, from 17.5 to 32.2. In 6 patients with true uremia and convulsions, the difference ranged from 43 to 114. In 5 of Scheel's cases the retention of over 2 per thousand urea was the result of some mechanical obstacle, congenital valve formation in the ureter, cancer of the prostate, urethral stenosis or other cause. The practical importance of this group lies mainly in the imperative necessity for reducing the intake of nitrogen in the diet, especially as a preliminary to an operation on the prostate. The amount of urea retained on a nitrogen-poor diet and on a milk diet should be studied for purposes of comparison. Scheel found in a series of cases that the nitrogen retention became much less on changing from a milk diet to an albumin-poor diet, the figure dropping from 90 to 26 mg.; from 141 to 32, etc., per 100 c.c. blood serum. The urea content of the blood serum, occasionally determined, is a guide for regulation of the diet, showing when it is necessary to restrict the intake of nitrogen. Over long periods it is impossible to get along with less than 50 to 60 gm. albumin per day, but for a short time much less than this will suffice.

Addison's Disease.—Motzfeldt declares that bronzing is by no means an indispensable element in the picture of Addison's disease. He describes the case of a woman of 43 who had had spondylitis twenty years before and had been treated at various times for pains in the abdomen. Gastric ulcer and stenosis in the bowel had been suspected, and she had lost much in weight. Suddenly she developed headache, vomiting and diarrhea with extreme asthenia and weakness. Slight bronzing of the back of the hands was noticed; the pulse was fast and small, often scarcely perceptible. The temperature was subfebrile and the tolerance for sugar, unusually low. Epinephrin by the mouth produced no effect, but after subcutaneous injection there was pronounced transient improvement. She died within two months, and both suprarenals were found almost entirely destroyed by tuberculous processes. He compares this case with those on record and reviews the literature. In treatment it might be better to use an extract of the suprarenal cortex intsead of epinephrin, as a deficiency of epinephrin does not seem to be the cause of the low pressure. Our positive knowledge of Addison's disease is still meager, especially its pathogenesis. Experiments on animals have only added to the confusion, as the blood pressure does not drop for days after removal of the suprarenals. When the pressure does drop, it cannot be modified even by continuous intravenous infusion of epinephrin.

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*Operations on the Chest for Pulmonary Tuberculosis. C. Saugman.—p. 585.

Thoracoplastic Operations for Pulmonary Tuberculosis.—Saugman reviews the experiences in this line at the Vejlefjord Sanatorium, a total of twenty-six operations in the last two or three years. The indications for the operation were about the same as for artificial pneumothorax; in fact, this had been attempted in every case beforehand. Local anesthesia is very important, and it is astonishing to witness the patient's indifference to the extensive operation. One patient began to converse on some trivial subject in the midst of the operation. Large amounts of the anesthetic are required to block the nerves, and one girl of 18, in good condition, died soon after the operation. It had been hastened on account of her collapse, so that the resection of five ribs and the suturing took only fourteen minutes; 190 c.c. of a 0.5 solution of procain (novocain) had been used in this case, after a preliminary injection of 0.015 morphin an hour before the operation. She had also been given a little sedative the evening before. Necropsy failed to explain the cause of death. In another case, signs of intolerance were evident from the first, and the attempt to use local anesthesia was abandoned.

The local anesthesia does away with the danger of aspiration of secretions and the whole procedure is much easier for the patient. In one case an abscess in the lung was cleared out after resection of three ribs, the patient sitting erect in a chair all the time. The total length of the ribs removed ranged from 80.5 to 172 cm., with 134 cm. as the average. There did not seem to be any advantage from including the eleventh rib in the resection. The pains after the operation seemed to be less severe in the cases in which the ribs had been resected subperiosteally. For this reason, operating in two sittings has its advantages. The after-care is extremely important, to ward off aspiration of mucus into the sound lung, and to give stimulants for the heart in case it shows signs of weakening.

The thorax sank in after resection of the ribs, so that the chest on that side was only a half or third of the size of the other half of the chest, as was determined at necropsy in one case with death seventeen days after the operation. Twelve of eighteen patients apparently lost the tubercle bacilli completely from the sputum in the course of a few months. In two or three cases recurring hemoptysis was what called for the operation, but in another case fatal hemoptysis occurred the seventeenth day after the operation. Possibly in this case the reduced ability to cough up the blood may have contributed to the fatal outcome, as the hemorrhage had been small. In the other case, pulmonary embolism the second day was responsible.

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THE INFLUENCE OF THE SURGERY OF THE GREAT WAR ON THE SURGERY OF CIVIL LIFE *

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It is my pleasant duty to declare open this Victory Meeting of the Section on Surgery—a privilege for which, I need not say, I am deeply grateful to you all. We are gathered here under this significant title to celebrate and commemorate the happy ending of a tremendous struggle in which many of our members took no inconspicuous part. The ending of that struggle came unexpectedly, and it is somewhat unfortunate that the Executive Committee of the section failed to consider that possibility. For, could the committee have had prevision, could it have looked even dimly into the then near future, I am sure that some one far more worthy than I, some one of more active military experience and of greater renown would stand here today as your chairman. Though such an occurrence would have been very probable and though it would have been fitting indeed, yet I can say with truth that no one, soldier or civilian, could stand here with a keener sense of the great privilege of the position or with a truer appreciation of the honor that goes with it.

But a position of prominence means little or nothing at this particular time. We are still too close to the days of peril and struggle, fear and doubt, for honor of position to have any undue weight in our thoughts. We were all cooperators in the struggle, and we are all sharers in the glory not so much of victory as of participation in the fight. Desirable as it is, victory is never absolutely necessary either to honor or to glory. After all, the finest traditions of our art were nobly upheld during the years of stress, and our greatest honor is the one common to each of us, one in which we all hold equal share—that of belonging to a profession which took an active part in the world war and stood openly on the side of right and justice almost two years before this great nation itself officially declared its intention of doing so. That in itself means enduring honor for you and me and our posterity.

We hear it reiterated that this war was fought in defense of democracy. If that be so—and I believe it is—who are more deserving, who are more worthy to be the objects of the homage and respect of the great democratic profession of medicine than those members of it who went forth and voluntarily offered themselves that the world might be a place of sunlight and not of shadow for all that we hold dear?

It is eminently fitting, then, that we give over this meeting to these men of action whose thoughts are born in experience and whose words are freighted with deeds; it is very proper that their ideas should be presented to this most democratic of American medical gatherings. This, I take it, is the real significance of the Victory Session, and in that spirit let us regard it.

It may not be amiss, however, for your chairman to offer as an introduction to the papers a very brief comment on the probable influence that the surgery of the war may have on that of civil life. It is well, perhaps, that this comment should come from one who saw but little active military service, either field or hospital, and whose ideas, therefore, like those of many of you, must arise as the result of deliberation on what is to be read or what is to be heard on the matter in question.

It is true that during the war no entirely new surgical principle was uncovered. But in this fact there is no discredit to surgery, since it is equally true that the long established principles on which surgery rests emerged triumphant from a test, the equal of which they will never meet again. Pasteur and Lister builded for all time. At no period of the war was the truth of the principles of asepsis and antisepsis in danger; their practice, however, was at first rudely shaken. The novelty of it all, the conditions of time, soil, movement, equipment both human and material, the number of wounded, their uneven distribution, the multiplicity, the extent and the severity of their lesions, the virulence and rapidity of their infections seemed about to overwhelm our methods of surgical practice. But organization of our forces, and the application of knowledge already possessed to conditions in the end adequately comprehended, finally resulted in the advent of the two great surgical developments of the war—the practice of débridement (first proposed by Colonel Gale of the British Expeditionary Force and later popularized by Lemaitre) which made possible the successful "primary closure" of contaminated wounds, and the so-called Carrel-Dakin method of treatment, through which successful secondary suture of once infected wounds was rendered feasible.

I am well aware of the arguments urged against the possibility of the successful adoption of the Carrel-Dakin method for general use in the treatment of wounds of war. I know that other antiseptics, such as flavine, dichloramin-T, bismuth iodoform petrolatum paste (bipp), etc., have very justly their warm advocates. I am convinced that the physiologic method of Sir Almroth Wright has its own good points; but nevertheless the testimony of the many men we know

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* Chairman's address, read before the Section on Surgery, General and Abdominal, at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

whose surgical skill and judgment and whose powers of observation are not open to question compels us to regard the Carrel-Dakin method as one of the great accomplishments of medical science in the recent war. Many of the objections to it as a war measure fall to the ground when its use in civil hospitals is contemplated. It matters not what particular feature of the method is the potent one—whether it be the mechanical cleansing of the wound, the action, antiseptic or physiologic, of the Dakin fluid on the tissues, or the technic of its application to the wounded part—the important fact is its demonstrated effectiveness, when properly applied; of that, I believe, there can be no doubt. It is logical to assume that, as débridement comes more and more into vogue, the need of the Carrel-Dakin method in all its details will be less urgent, since débridement either does away with infection or greatly diminishes its severity.

These, then, are the two most important gifts that the recent struggle brings to the surgeon in civil life. It is obvious that their application will be far wider and more useful in the field of traumatic surgery than in that of the surgery of disease, and this fact will doubtless have a most fortunate bearing, since it will give rise to added interest and efficiency in the domain of industrial and accident surgery, which has not yet had the general attention to which it is entitled and which it is certain to demand in the very near future. We must turn our efforts from the great army of fighting men to the still greater host of industrial workers which crowds daily in and out of our mammoth industrial plants. Here is presented to us a problem similar to that of the war—less intense, perhaps, but surely of wider scope. Here are the wounded, the maimed, the broken, and here opens out to us the field wherein the gift of increased knowledge and experience that war has given us may be best applied. I do not mean to say that the surgery of disease will reap no benefit from our recent experience. I feel that it will. The good may not be great enough to be styled important; but good it will be, even if it mean only laying more emphasis on some phases of our therapy and practice, or lessening the degree of value which we have heretofore ascribed to others.

It is clear that, because of the entirely different conditions obtaining in civil life, the results of our work there must be far better than could be hoped for in the military field. Though the human material hurt and torn in war is drawn from our strongest, our most rugged, our best fitted, yet that advantage is far outweighed by the disadvantages that necessarily accompany modern warfare. The multiplicity of wounds, the delay in the application of treatment, the virulence of the accompanying infection and the extent of the tissue traumatized are seldom encountered in the ways of peace. War has brought into sharp relief the fact that the prompt application of proper treatment is the prime essential to success in traumatic surgery and that lack of it is the great contributor to disaster; it has given certainty to our opinion that mechanical cleansing of a wound has greater basic value than attempts at chemical sterilization; it has given new strength to our belief that the body tissues and fluids possess in themselves tremendous powers of resistance to infection, if only the contaminating agent and the hopelessly traumatized tissue are removed. We knew these things before the war; we apprehend them more clearly now. With this surer grasp and with the hospital conditions that exist today in almost every community in the land, our results in traumatic surgery must be far more satisfactory than ever before. Whether measured in terms of lessened human suffering or increased human efficiency or in those of economic profit and loss, the benefit to the community at large will be very great indeed.

The term "hospital conditions" prompts me to remind you that not a little of the success of surgery in the war was due to efficient hospital organization and to the practical cooperation of the clinicians in the various specialties with the workers at the laboratory desk. Team work accomplished veritable wonders, and we must not permit its great value to go unappreciated by those responsible for the conduct of our civil hospitals. Hartwell and Butler,[1] in an excellent paper read before the American Surgical Association in 1918, called attention to this fact. The activities of all departments of a hospital must be centered in the patient. The chemist, the physicist, the pathologist and the bacteriologist, quite as much and quite as truly as the clinician, must come in touch with the patient and the problem presented by the patient, else the greatest possible service will not be rendered. The results already achieved and those we have good reason to hope for in the plastic surgery of the face and jaw—maxillofacial surgery—are striking examples of what may be accomplished by surgical team work, and it must be noted by all civil surgeons interested in this field. Maxillofacial surgery is not the province of the general surgeon alone, but of the general surgeon working in conjunction with the dental surgeon, the ophthalmic surgeon, the rhinologic surgeon and the aural surgeon. Complete success is attainable only through efficient cooperation, and this lesson must be carried into our civil practice.

PREVENTION AND PRECISION

If we search for the dominant note sounded in the contribution that military surgery has brought us, it may be well expressed by the two terms "prevention" and "precision." What does débridement with its excision of all devitalized tissue, all foreign material, all denuded bone do but *prevent* the development of contamination into infection and make far less probable the dreaded appearance of tetanus, gas gangrene, etc.? What factor in it contributes more to its success than the *precision* with which it is carried out? What does the Carrel-Dakin method accomplish if not the *prevention* of impending infection or, in the event of infection, its spread? What is the keystone of its splendid arch if not the *precise* technic with which the mechanical cleansing of the wound is done, the *precision* with which the solution is prepared, and again the *precision* of its application to the open wound? On what point in the treatment of recent wounds of the joints, the chest and the brain is the military surgeon more strongly insistent than the *precision* and completeness with which the serous membrane lining the cavities must be closed after mechanical cleansing is accomplished? Always the attempt at *prevention* of disaster by *precision* in the application of the means to the end! In all this there is nothing new of principle to the surgeon in civil life. The novelty lies in the overwhelming power of the testimony to its truth.

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[1] Hartwell, J. A., and Butler, E. F.: The Application of the Teachings of War Surgery to Civil Hospital Conditions, Surg., Gynec. & Obst. 27: 377 (Oct.) 1918.

ACCOMPLISHMENTS OF MILITARY SURGERY

To sum up briefly the accomplishments of recent military surgery which will affect in some degree the practice of surgery in civil life:

It has demonstrated that, even in severe wounds with existing contamination, infection can be prevented or controlled. Tetanus has practically been banished because of the preventive quality of the antitoxin. Treatment by magnesium sulphate and phenol (carbolic acid) has been definitely put aside. The wound conditions favoring the development of gas gangrene are recognized, its pathology is known, the earliest signs of its presence are tabulated and, as a consequence, its treatment is now on a more scientific and successful basis. There are promising indications that an effective antitoxin against it may be developed. There is no longer any question as to the proper treatment either in peace or in war of penetrating wounds of the abdomen. The contention of the civilian surgeon has been upheld. Many of our doubts in chest surgery have vanished. The need of complicated pressure apparatus has gone with the establishment of the fact that without it the pleural cavity may be opened freely and the lung handled with no undue danger. The final report of the studies on empyema, which was rampant in our war camps, will place the treatment of that complication in a clear light. Evidence that is convincing has established beyond doubt the position of those who in prewar days asserted that the synovial membrane had strong power of resistance to infection and that drainage of joints recently wounded is not only unnecessary but often harmful. The factors entering into the production of shock and the details of its treatment have been so vividly delineated for both the public and the profession that no surgeon who has to do with the great industries in which severe injuries are common can afford to neglect provision for the prompt and efficacious treatment of the shock that may accompany them. The treatment of fractures has been stabilized by the standardization of splints and other apparatus for immobilization. The use of plaster of Paris has been very greatly supplanted by that of the standardized splints and apparatus. Many problems in connection with the transplantation of bone will be cleared up. Methods of transportation of the injured will be improved. Decision will be forthcoming in many bothersome questions with relation to the surgery of the nerves, such as tubulization by fascia or by pieces of vein, and anastomosis by autografts or by nerve splitting. Indirectly, surgery will benefit through the stronger spirit of discipline, the more rigid practice of economy, and the more efficient measures of cooperation that will obtain in our civil hospitals.

A WARNING

A word of warning to the young medical men who entered military service and who in the discharge of their duties have had some surgical experience: Do not let the story of the days that followed the closing of the Civil War be repeated. Do not imagine that the experience acquired in military surgery, unless it be based on or followed by a thorough surgical training in a civilian hospital, warrants any man in assuming that he is an able surgeon or that he has any license to regard or conduct himself as such. I trust that these words are spoken unnecessarily; but with the experience of the past in mind, it seems wiser to say them unnecessarily than to leave them unsaid.

RESTORATION OF WOUNDED

No story of the medical aspect of the war will be complete that does not take into account the restoration and reeducation which we owe as a duty to the 80,000 broken and maimed boys that the war has given back to us. Full consideration must be given to the numerous cases of chronic osteomyelitis, of injury to peripheral nerves, and of chronic suppuration that will long people our military hospitals. We are yet too close to the days of battle to have a proper perspective of the remote influence of these conditions on civil surgery. Only when based on the study of end-results can a true evaluation of the worth of any surgical procedure be had; for that reason, it is obvious that some conclusions can as yet be held only tentatively—a point that deserves more emphasis than can be given to it in so brief a communication as this.

PHYSICAL TRAINING

Quite as interesting a problem is that suggested by the fact that in the state of Massachusetts more than 40 per cent. of the men called in the first draft were rejected as physically unfit and that thousands of boys from the country at large were accepted and sent overseas only to be found unsuitable for active service because of their physical defects. Such a condition should not obtain in this country. To whom will the nation look, if not to us, for the plan of some sort of physical training that will prevent the continuation of such an undesirable state of affairs? Less could not be asked or expected of a profession that has always given proof of its firm belief in the worth and sacredness of human life and in the value of bodily health and soundness.

THE CORRELATION OF LABORATORY AND CLINICAL TEACHING IN SURGERY

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No one can come into close contact with medical students without becoming impressed by the constant complaint that the laboratory subjects are not taught from the practical standpoint. Many of the students who have just completed academic courses in which much that has occupied their time has, to their minds, had no direct economic value, enter the professional schools with a determination to employ every moment to best advantage. They are restive under the restraints of the first two laboratory years. For example, many feel that much time in anatomy is wasted, and unfortunately they are too often strengthened in this opinion by the expressed views of some of the less thoughtful teachers in the laboratory and clinical branches. It is the failure to demonstrate to the student the real value of the subject taught, and the failure of the teachers to appreciate the importance of the subject-matter itself, which causes discontent. In consequence, there is danger that the teaching in the laboratory branches may depart from the well established and correct method of presenting the subject-matter so that the student learns by personal observation, always a slow, laborious process, but the only one which rests on a permanent, firm foundation.

On the other hand, no such complaint is heard of the clinical branches. Any and every subject, however presented, is considered worthy of profound study if it only deal with a condition to which the human flesh is heir; but oftentimes the teaching does not follow the more advanced and best recognized methods, and the students are graduated with a theoretical knowledge of these subjects, dependent on the faculty to memorize the written word, and quite untrained in powers of observation, deficient in ability of deduction from facts gained through the impressions of their five senses, and incapable of expressing in the English language the results of such mental processes as they may possess.

The teaching of surgery has very largely depended on lectures to fairly large groups of students. These lectures were of two kinds, the theoretical, and the clinical lecture, or demonstration. They differ from one another only slightly. In the one a subject is arbitrarily chosen and talked about; in the other the patient determines the subject. Such teaching had great advantages when there were few good textbooks or adequate monographs available to the student, since it enabled him to hear the views of the leaders of the profession; but today, with the many books and widely circulated and readily accessible magazines, these presentations to large groups are antiquated. The theoretical lecture may still serve three useful purposes: first, to arrange and correlate facts for the student into a well ordered, well balanced whole (but even this could probably be accomplished better by a printed article); second, to settle disputed points on subjects about which there exists an honest difference of opinion among the leaders of surgical thought (the student being incapable of weighing the evidence for reaching a decision, and thus a discussion by a learned teacher often proving enlightening); and third, to impart new facts which the student could learn only through wide reading of current literature, for which he would not have the time. Except for these purposes lecturing should be abandoned.

Surgery lends itself well to the modern principles of teaching, which, if followed, would result in a decided modification of the method of conducting courses hitherto given in our schools. The student must gain his knowledge through the use of all his senses, and have the acquisition take place over a long period of time, with the repetition of those impressions occurring without a sense of fatigue. We must associate the various stages of a disease by constantly rejuvenating past memory pictures in connection with present conditions, thus coordinating the widely differing appearances in the course of a disease, and must also demonstrate the connection of cause and effect. We must, therefore, be able to control our demonstration material. This is possible only by the employment of animals. With these purposes in view we have planned the course at Columbia University as follows:

During the first half of the second year a series of demonstrations are given to small sections of the class, in which they study the application of physiology to the various surgical problems that they will meet later. Normal functions are presented and considered from the clinician's standpoint. For example, the recent work of Graham and Bell[1] on the mechanics of the thoracic cavity and of pneumothorax is based on the application of physics to physiology, and this is exhaustively demonstrated and the problem explained in detail.

In this way atmospheric pressure, negative pressure and a vacuum become real entities, things that will have to be reckoned with in the treatment of disease, and they immediately cease to be intangible, indefinite somethings, dimly associated with mercury columns in glass tubes, Sprengel air-pumps, glass bell jars, and 15 pounds to the square inch. These should be demonstrated on living animals, their importance in connection with thoracotomy should be emphasized, and the student should gain a knowledge of them by employing all his senses. Thus he will form a lasting memory picture to be used when he requires it in connection with his study of empyema or other diseases of the pleura and lung. Other subjects taken up are the series of classical demonstrations by Cushing[2] of the effects of intracerebral pressure on the blood pressure, pulse and respiration. The nervous system is further studied by repeating Sherrington's[3] epoch-making experiments of unipolar stimulation of the motor cortex of the brain, and, in addition, the confirmation of cortical localization by extirpation of portions of the cortex of the ascending frontal convolution.

The peritoneal cavity is considered from the standpoint of absorption and drainage, and the properties and peculiarities of the peritoneum and omentum are shown, especially their reaction to foreign bodies. The results of the brilliant and illuminating work of Cannon[4] on intestinal peristalsis and stomach function, as shown by fluoroscopy, is utilized to give the student a basis for knowledge of visceral function. In these demonstrations the students act in turn as assistants.

In the second half of the second year the student commences his consideration of true surgical conditions. A simple wound is chosen. He makes such a wound on an animal and watches it heal. From time to time a section of such a wound is taken and studied under the microscope. He thus associates the histology with the extremely important element of time. He sees what changes take place in the blood clot, he learns when the fibroblasts first appear, understands the formation of granulation tissue, and thus gains a rational conception on which to base the after-care of such a lesion. Similar wounds on patients from the clinic are then demonstrated, a few representative cases being shown, and from the many microscopic slides, laboriously collected for years past by Dr. W. C. Clarke, appropriate ones are demonstrated and thus the histologic changes are associated with the clinical appearance. At first a simple incised wound of the skin and subcutaneous tissue is studied, and later the healing process in wounds as it occurs in the various other tissues, muscles, aponeuroses, bones, intestines, liver, spleen, kidneys, etc., is demonstrated. After this simple healing process is learned, the changes or accidents incidental to healing are studied in the same manner; for example, healing under a scab, pyogenic infections, specific infection, etc. In every instance the student either makes the lesion on an animal or he sees it made and then watches that same lesion day after day and studies and observes its phases and changes as they occur. This is supplemented by lantern slide demonstrations of similar lesions in human beings, and the study of microscopic slides.

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[1] Graham, E. A., and Bell, R. D.: Open Pneumothorax: Its Relation to the Treatment of Empyema, Am. J. M. Sc. **156:** 839-872, 1918.

[2] Cushing: Some Experimental and Clinical Observations Concerning States of Increased Intracranial Tension, Am. J. M. Sc. **124:** 375, 1902.

[3] Sherrington and Grunbaum: Observations on the *Physiology* of the Cerebral Cortex of Some of the Higher Apes, Proc. Roy. Soc. **69:** 1901.

[4] Cannon, W. B.: The Movements of the Stomach Studied by Means of the Roentgen *Rays, Am.* J. Physiol. **1:** 359-382; The Movements of the Intestines Studied by Means of the Roentgen Rays, Am. J. Physiol. **6:** 251-277; Peristalsis Segmentation and the Myenteric Reflex Am. J. Physiol. **30:** 114-128.

In the third year the study of special surgery begins. No attempt is made to cover the entire field. All we hope to do is to take up a few of the most important subjects, and to demonstrate the correct method of learning about a disease. We trust to the student by his reading to inform himself on the myriad of others. We educate him so far as to be able to study surgical literature intelligently. We do not attempt, because we believe it impossible, to give him an encyclopedic knowledge of surgical affections.

The following subjects have been selected because of their importance and of the possibility of demonstrating them on animals: peritonitis, appendicitis, diseases of the gallbladder and gallducts and abscess of the liver, diseases of the pancreas, acute ileus, hydronephrosis, abscess of the kidney, diseases of the ductless glands, empyema, and osteomyelitis.

Each subject must be presented in a special manner, and an intimate knowledge of how each condition develops in the animal is required. The choice of the species of animal best adapted to the development of the disease to be demonstrated is an important element of success. The time element is such an important factor that a careful curriculum of the student's time schedule must be obtained. This has been made possible at Columbia by a cordial cooperation of the faculty and the dean. The surgical course is arranged so that three mornings from 9 o'clock to 1 are available—Tuesday, Wednesday and Friday.

Each subject is studied in quite the same manner. The class is divided into groups of ten, an instructor is assigned to each group, and the entire class is taught at the same time. As an example I shall explain in detail how appendicitis is studied.

There is an anesthetized dog for each group of ten students. The instructor, assisted by one of the class, opens the abdomen under the rigid asepsis of modern technic, delivers the cecum into the wound and places a purse string suture about the base of the cecal pouch in such a manner as not to interfere with its blood supply, and yet to isolate that portion of the intestinal canal from the rest and thus to prevent anything introduced into its lumen from passing into the colon. He then makes an opening in the pouch 0.5 cm. long and introduces a small gauze tampon saturated with a pure culture of *Streptococcus hemolyticus*[5] into its lumen, and scarifies the mucous membrane lining with a scalpel. He then closes the opening with a purse-string suture and drops it into the abdomen and closes the abdominal wound. The student assistant then writes in the history a description of the procedure. As we have about ten sections in our classes, we have ten animals that receive identical treatment.

The students are instructed to watch the animals in their cages in the hospital and the assistant at the operation records notes as to changes in the dog's condition, keeps a temperature chart and does a daily blood count. After forty-eight hours, four of the animals are killed and a necropsy is performed immediately; we thus have one animal for each group of twenty-five men. The condition found at this time will be a well established florid inflammation in the cecal pouch, which will be wrapped about with omentum greatly swollen and inflamed, and in addition a well marked local peritonitis, or at times a localized abscess. The student thus sees the cause and effect. He records a memory picture of the reaction of the peritoneum to bacterial invasion. Four of the remaining animals are operated on under strict asepsis, a student acting as assistant. The cecal pouch is removed and a rubber tube drain is placed down to the site of the necrosed tissue in two of the dogs, and the other two are sewn up tight. On the following day, seventy-two hours after the first procedure, the two remaining dogs that have not been operated on are killed and necropsies performed immediately afterward. At this time a widespread, diffuse, and, at times generalized peritonitis of a virulent character is demonstrated. The dogs that have been operated on are also killed at this time, and the adhesions about the drainage tubes, the recovery of the remainder of the peritoneum, in fact, the effect of removal of the focus of infection and the good results of drainage are demonstrated. The outcome of the treatment in the animals in which the focus of infection was removed and the abdomen immediately closed will depend on the type of peritonitis present at the time of the operation. At times perfect recovery of the peritoneum may be shown, while in other cases the peritonitis has progressed and become diffuse and generalized.

During this entire period of observation the student makes blood counts and keeps the history, recording appropriate notes. At the necropsy he takes bacterial smears and cultures, writes a description of the findings and takes portions of the organs and tissues, which are sectioned and mounted, and which he studies at a subsequent exercise. A large bulletin board divided in squares is placed in the laboratory, and each space is devoted to a subject or disease. Here is posted by the instructors, from time to time, lists for collateral reading, any special features to be noted in the postoperative animals in the hospital, and such other data as may be pertinent to running the course. After these demonstrations, a conference is held on appendicitis, and the subject is discussed from the standpoint of its incidence in man, the student having read some work assigned to him covering the subject. Each subject is presented in a similar manner, some requiring weeks and, in cases of bone lesions, months for their complete development. During this period the student watches the animal, makes notes and records observations, and we believe this time element is one of the most important features of the method. It impresses on the student's mind the idea of the course of a disease. It gives him the first inkling of the difference between the word acute and chronic.

In addition to these subjects there are a number of very important ones which must also be taught, but which do not lend themselves well to animal demonstration. These are neoplasms of all kinds, affections of the female mammary gland, affections of the stomach and intestines. In these we have adopted a different method of presentation. The class is divided into groups of ten men, and conferences are held in which the students carry on the exercise as much as possible under the supervision of the instructor, correcting one another and answering each other's questions. Coincident with these conferences an attempt is made to demonstrate cases which illustrate the disease under discussion, and pathologic specimens of the various lesions are shown.

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[5] From experience we have found that more uniform results are obtained with this organism than with others. We have employed Bacillus aerogenes-capsulatus and Staphylococcus aureus, but our results varied widely and for demonstration purposes were not sufficiently uniform.

A course in fractures of the bones of the extremities is managed by combining clinical work on patients by small sections of students with theoretical conferences. Cases are shown the student and he follows them from beginning to end, week after week. On other days conferences are held and the subject discussed at length. Here a textbook is employed and we attempt to regulate the student's reading, to train him to connect his reading with his clinical experience. In this course we have a sharp contrast with the animal experimental course. Here we emphasize the importance of enlarging our store of facts by study of the written word, and show how knowledge acquired in this way may be made use of at the bedside or in the dispensary. We consider fractures of the bones of the extremities particularly well suited for this purpose, as the history is usually clear cut and pertinent as to details, the symptomatology is direct and striking, and the physical signs are demonstrable and readily appreciated, while the treatment, being mechanical, appeals to the simple, untutored intelligence of a beginner. No attempt is made to demonstrate every form of fracture or everything about any special kind of fracture, but a sufficient number of cases are demonstrated and followed to make the student familiar with changes common to fractures, and so in his studies his reading may be carried on intelligently.

A course in minor surgery is also given—two days a week for the entire year. The class is again divided into small sections for its clinical work, and twice a week a limited number of cases are studied. One case is taken by two men, who work it up carefully in all the details and present it to the section, when an informal discussion of the case is carried on, the many details presented by the student being commented on by the instructor. The simpler class of cases is chosen at first. The object being to drill the student in methods of examination, history taking, clinical pathology and then to arrive at a diagnosis and to outline and carry out the treatment, minor operations are performed before the student, and bandages and dressings are applied by him.

At the end of the third year, during the last eight weeks, the entire class returns to the dissecting room and takes up the study of anatomy of the extremities by dissections, demonstrations and conference, during which period the course in orthopedic surgery is begun and the study of joint anatomy and function, and the application of muscle anatomy to muscle function, are studied. Clinical lectures and demonstrations to small groups are given twice a week. These are correlated with the work in the dissecting room in order to bring out the intimate connection between anatomy and orthopedics and fractures.

In the fourth year the class is divided into small groups and bedside instruction is given. The student spends all day in the hospital, and so is able to study the cases before operation. He may be present at the operation and then follow the case during the postoperative course. He has the opportunity of examining the pathology of the specimens removed and of doing the clinical pathologic tests. During his stay in the hospital he is given a short course in cystoscopy, during which he has the opportunity of examining bladders through the cystoscope, and by lantern slides he is shown examples of the commoner lesions.

Once a week patients presenting postoperative cases are taken to the amphitheater and the treatment is discussed before the entire class, the wounds are dressed and special stress is laid on the question of drainage, abdominal, thoracic, and of the soft parts. As many complications are shown as occur on the service; in fact, the cases which do badly are taken up at these conferences and freely discussed.

In this course a determined effort has been made to depart from the old theoretical lecture or large clinical lecture, which differ from one another only in that a patient serves as a text in the one, while in the other the subject is chosen beforehand. Here the ear is about the only sense which is appealed to, possibly to a slight extent the eye, but smell and feeling are not called on to register memory impressions and much of the value of the study of diseases is lost.

An attempt has been made to fashion the teaching of surgery along the lines of modern ideas in the psycology of learning, to conform to the three laws of readiness, exercise and effect, so ably expounded by Thorndike,[6] who, in his analysis, has so convincingly demonstrated that synapses between neurons are not only the anatomic but indeed the physiologic basis of behavior, and that these may be strengthened or weakened according to the above laws.

A REPORT OF A WARD EPIDEMIC OF MENINGOCOCCUS MENINGITIS

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During the present emergency an exceptional opportunity for the study of acute infectious diseases has presented itself. Many things have come to light since the well equipped laboratory and the patients have been brought together under military control. The study of meningococcus meningitis has held one of the central places of interest, not only on account of its frightful course when untreated, but also because of the progress that has been made in its study. The old conception of the disease as being primarily an infection of the meninges is now untenable in the face of recent laboratory and clinical findings. The disease may be better understood by regarding it as a bacteremia. This change of view has led to a more effectual method of treatment, that is, the combined intravenous and intraspinal administrations of serum.

In times past so little attention has been paid to the infectious nature of the disease that the patients were taken care of in a general medical ward. In the military establishments, however, great stress has been made on the infectious nature of meningococcus meningitis. The cases have been carefully isolated, contacts watched, ward attendants instructed to wear gowns and masks and a careful search for carriers made. The carrying out of this program has entailed not a little expense to the government. The report of a ward epidemic, though very small, is of considerable importance in showing the real practical necessity for the wise precautions taken to prevent the development and spread of the disease.

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[6] Thorndike, Edward Lee: Educational Psychology, Ed. 2, New York, Teachers' College, 1910.

REPORT OF WARD EPIDEMIC

Sept. 27, 1918, Ward E-1, a general medical ward, was converted into a pneumonia ward to accommodate the increasing number of pneumonia cases that developed during the epidemic of influenza. The ward contained thirty-two beds; the prescribed amount of air space and the cubicle isolation system were employed. There was practically no porch space, since the side and end porches were used as covered ways, thereby making the ward darker than usual. Additional nurses and corps men were assigned to the ward. September 27, sixteen patients were admitted and by the 30th the ward was full.

October 7, at 7 p. m., ten days after the conversion of the ward, one case of meningococcus meningitis developed, followed by three the next day and two on the day following. The last case was diagnosed, October 8, at 9 p. m., thus making six cases to develop within a period of fifty hours. This group will, for convenience, be called the bed series. October 18, at 11 a. m., and October 21, at 8 a. m., respectively, two more cases developed within forty-five hours of each other. The two cases will be called the ambulant series.

DATA IN EIGHT CASES OF MENINGOCOCCUS MENINGITIS

		Signs Establishing Original Diagnosis									Later Confirmation			Treatment		
Case Number	Days in Ward	Erythematous Rash	Petechial Spots	Psychic Changes	Headache	Nausea and Vomiting	Stiff Neck	Increased Reflexes	Asymmetrical Reflexes	Lumbar Puncture	Lumbar Puncture	Blood Culture	Type of Organism	Intraspinal Serum	Intravenous Serum	Result
1	10	+	+	+	0	+	+	+	+	+	+	0	IV	153	370	Recovered
2	10	+	+	+	+	+	0	0	0	+	+	+	..	...	100	Died
3	7	+	0	+	0	0	+	+	+	+	+	0	..	145	634	Died
4	7	0	0	+	0	0	0	0	0	+	+	0	..	120	365	Recovered
5	13	0	+	+	+	0	0	+	0	+	+	0	..	20	100	Died
6	10	0	+	+	0	0	0	+	+	0	+	0	..	300	1,250	3 relapses, recovered
7	18	+	+	+	+	+	+	0	0	+	+	+	IV	165	205	Recovered
8	26	+	+	+	0	0	0	+	+	0	+	+	IV	60	370	Recovered

Case 4 was transferred to a convalescent ward, where he developed the disease. Case 8 developed pneumonia in the ward September 27.

After the development of the first case, all patients were examined for suggestive signs. As soon as any one thing was found, a tag, with the symptoms written on it, was attached to the foot of the bed and the suspects were carefully watched. All the patients in the ward were examined four times a day until two weeks had elapsed after the first case occurred. The ward attendants were instructed to look especially for rashes, changes in mental attitude, stiff necks, nausea and vomiting. The ward was quarantined. All attendants and ambulant patients wore gauze masks. As soon as a positive diagnosis was made, 1 c.c. of antimeningococcus serum was given subcutaneously for desensitization, and the patient immediately transferred to the meningitis ward.

A search for the source of the infection disclosed the fact that none of the unfortunates had, to their knowledge, been exposed by contact to any meningitis prior to their admission to the ward. Throat cultures were immediately made of all the ward attendants, and patients, three cultures each for the attendants, and two each for the patients. October 8, the day following the outbreak, while preparing a patient for a lumbar puncture, one of the newly assigned corps men displayed an unusual amount of intelligence in the manipulation of the patient. On being questioned, it was learned that he had himself been a victim of the disease during the preceding winter and had worked as an attendant in the meningitis ward for some time afterward. The only positive culture found, from all those taken, was that from the corps man mentioned above. This organism was agglutinated by polyvalent serum, but unfortunately was not typed. The carrier suspect was immediately transferred to the meningitis ward, where treatment was instituted to rid his nasopharynx of the organism. Further attempts to find a positive culture in this person were unsuccessful.

The patients of the bed series were confined to bed during their entire stay in the ward, the only contact being with the ward attendants and a very few occasional visitors, who had to do only with the particular patient they came to see. Patient 2, a nurse, who is being counted in the bed series, was on duty for ten days in the ward. She came in contact with the night force, as it was a habit of the day nurses to stay on duty after hours, during the emergency, until they were actually ordered off the ward by the ward surgeon. It is fair to count this case in the bed series, since this patient went off duty at 12 (noon), October 7, and died at 10 o'clock the following morning, with the fulminating type of the disease. The two patients in the ambulant series were up and about during the time when the first group sickened with the disease and were thereby exposed to the carrier and the other patients. The patients were scattered all over the ward, only in two cases occupying adjacent beds. All the cultures that were successfully typed were of the same group; one case, however, in which both the blood and spinal fluid were typed, showed a difference in type. Only three cultures attained sufficient growth for typing.

PROBABLE PERIOD OF INCUBATION

A slight amount of information as to the period of incubation of this disease is shown by the fact that each group of cases developed within a period of fifty hours of each other, the bed patients coming on from seven to thirteen days after exposure to the carrier, and the ambulant patients developing the disease from eighteen to twenty-one days after exposure to the carrier, or from nine to fourteen days after exposure to the other patients. This would indicate that the incubation period is between one and two weeks. It is important to note that the disease in the two patients in the latter group ran a much milder course; this probably means that these persons contracted the disease from the bed patients, thus lending weight to the doctrine of attenuated virulence by passage through another individual.

CONCLUSION

1. A ward epidemic of eight cases of meningococcus meningitis is reported.
2. The tracing of the epidemic to a carrier is reported.
3. The carrier presents a really important problem and must not be disregarded.
4. The importance of observing contacts is emphasized.

5. A suggestion is made that the possible period of incubation of the disease is from seven to fourteen days.

6. Fourteen days is recommended as a quarantine period for meningitis contacts.

EMPYEMA AT BASE HOSPITAL, CAMP SHERMAN, OHIO

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On entering service at any of the base hospitals of the United States in the winter or spring of 1918, one was immediately impressed by the prevalence of disease due to transmission of infections through the medium of secretions from the mouth and nose. The most serious of these infections was pneumonia, and the most serious complication of pneumonia was empyema. Men of long professional experience were impressed with the idea that the principles acquired in civil practice concerning the treatment of empyema were not applicable to the type of disease encountered in military camps. There was often considerable difference of opinion between members of the surgical service as to the proper methods of treatment, and still more often differences in opinion between the medical and the surgical services as to how these cases should be managed. This condition of things existed at the base hospital, Camp Sherman, Ohio, owing to the fact that the surgical service at that time believed in early operations; but so many of the patients died soon after operation that the medical service discontinued transferring patients, and, in some instances, went to the other extreme and delayed operation too long.

In October, 1918, when the influenza epidemic was at its height, it became apparent that it would be followed by many cases of empyema, and, as the final decision concerning the surgical treatment to be employed would devolve on me, I undertook the study of the cases treated prior to July 1, 1918. This study disclosed that fifty-three patients had been treated in the surgical service, with twenty-three deaths; simple thoracotomy had been performed forty-nine times, and rib resection four times.

RESULTS OF OPEN DRAINAGE TREATMENT

All were treated with open drainage and the instillation of surgical solution of chlorinated soda (Dakin's solution), under the supervision of a surgeon, eminent in civil life, who was fresh from a course of instruction at the Rockefeller Institute. These patients were sick for a long time, and eventually the use of Dakin's solution was discontinued, and instillations of 2 per cent. formaldehyd solution in glycerin (containing approximately 0.07 per cent. of absolute formaldehyd) were substituted. Immediate improvement took place, the septic condition disappeared, the patients put on flesh, and it was confidently expected that they would speedily recover. This group of cases formed the basis of the article by Lieut.-Col. J. G. Sherrill,[1] published in April, 1919, but written in the summer of 1918, and at that time submitted to this service for review. Sherrill was an accurate observer, and his conclusions were justified by the condition of the patients at that time and were indorsed by all of us. Subsequent experience with this series of cases, further study of bacteriologic findings, and experience in the use of chemical antiseptics, including formaldehyd glycerin solution, in another series brought us to a far different conclusion. The query naturally arises concerning the numerous reports from other hospitals on this subject as to how many of them would have retained their reported opinions had they reserved their reports until the completion of a given series of cases. When Sherrill was transferred from this hospital, all the patients who had been under his care had apparently recovered.

Fifteen patients recovered under the use of Dakin's solution and were discharged. Fifteen remained under treatment after the change was made to formaldehyd glycerin solution. The wounds closed in four patients who were returned to duty and not heard from again at this hospital. In five of the remaining eleven, the wounds also closed and these patients were discharged, but in a few weeks were readmitted with reopened sinuses leading into the pleural cavity. During August, these eleven patients were subjected to costatectomy, after a study of their chests in the roentgen-ray laboratory. This was done by passing a small catheter through the sinus and introducing a solution of potassium iodid. This procedure outlined the cavity as viewed through the fluoroscope. In each case large quantities of partially organized lymph and pus were found in the pleural cavity. One of the patients died a month after the operation from acute infection of the opposite lung. Three had connections between the bronchi and the pleura and were transferred to a general hospital, where two recovered and one died from pneumonia in October, which made the final results twenty-five deaths in fifty-three cases. Two patients are still in the hospital after more than a year, and each presents a small sinus through the thoracic wall. Each has had several operations for the purpose of collapsing the chest wall, and at present is convalescing and will soon be ready for discharge.

TABLE 1.—MORTALITY BASED ON TIME OF OPERATIONS

		No.
Deaths:	Those operated on prior to the eleventh day after development of pneumonia	7
	From twelve to twenty-four days	5
	From thirty-one to fifty-five days	11
Recoveries:	Tenth day	1
	Eleventh day	1
	Twelfth to twenty-fourth day	19
	From twenty-eighth to sixty-first day	10

The lowest mortality occurred in the period in which operation was performed from within twelve to twenty-four days after the development of pneumonia; and in the period exending beyond the thirtieth day, the mortality was approximately 50 per cent.

The bacteriologic findings in this series of cases were pneumonia from pneumococcus Type IV. In the pleural fluid a nonhemolytic streptococcus was found in the majority of the cases. Five presented *Streptococcus hemolyticus* in the pleural fluid.

RESULTS OF TREATMENT BY ASPIRATION

The medical service experimented with aspiration and instillation of formaldehyd glycerin solution, and a few members of that service in May and June, 1918, were enthusiastic concerning this treatment. Two patients were reported as having recovered without other treatment. Since that time the medical service has experimented with simple aspiration, repeated at intervals of three days with results quite as satisfactory as those obtained in the use of formaldehyd glycerin. The chief of that service informs me that he is now fully satisfied that when pus forms it should be evacuated from the pleural cavity under the same surgical rules that govern its treatment in other regions of the body.

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[1] Sherrill, J. G.: Observations on Empyema, Surg., Gynec. & Obst. 28: 371 (April) 1919.

In arranging for the treatment of prospective empyemas early in October, 1918, conferences were held with the chief of the medical service and with the members of the surgical service who had had experience in handling the disease in this hospital during the previous year. A course of procedure was agreed on, and in subsequent proceedings the two services operated in harmony. It was decided that in the early treatment, aspiration and instillation of formaldehyd glycerin solution be given a fair trial. It was also agreed that the chest should not be opened in the early stages of the disease. The use of the aspirator in our first cases soon convinced us that this was not an entirely harmless procedure. Several patients with chests full of fluid and with quiescent pneumonia developed severe pain immediately after removal of seropurulent fluid with the aspirator. In one case the pneumonia again became active. The pleuritic fluid did not reform, and the patient died. The instillation of formaldehyd glycerin solution was found to be without beneficial effects. In one of the early cases a procedure used at Walter Reed General Hospital was adopted, that is, the introduction of a small drainage tube through a cannula, and instillation into the pleura of Dakin's solution. This patient did badly, and after five days rib resection was performed, after which he recovered slowly, requiring two secondary operations. We then limited the use of the aspirator to a diagnostic purpose, and after the fluid became purulent opened the chest by resection of one rib and introduced two large drainage tubes. No irrigations or instillations into the pleura were made for ten days after the operation, and in many of the cases were not made at all.

METHOD OF OPERATING

The area was infiltrated with a 0.25 per cent. solution of procain: first, the subderma and then the muscle over the selected rib, and finally, the periosteum covering the rib. In this manner a portion of the rib was removed and drainage tubes were introduced as easily as thoracotomy could be performed and without distress to the patient.

BACTERIOLOGIC FINDINGS

All the patients had bronchial pneumonia of Type IV following the influenza epidemic of October, 1918. All were very sick for a long time with a severe general infection, and in all of the fatal cases the patients had serious complications, or rather infections involving other than the pleural cavity. Many of the patients were considered to be in a hopeless condition at the time of operation, but made excellent recoveries.

COMMENT

It thus appears that the severity of the disease and the tendency to chronicity bore no relation to the variety of organism found in the pleural fluid. In no case was operation performed earlier than seventeen days after the onset of pneumonia, and the average period was twenty-five days. In no case were instillations into the pleural cavity permitted during the first ten days. Cases presenting profuse and offensive discharge were then treated with instillations. Dakin's solution was used in five cases; formaldehyd glycerin solution in five cases, and simple flushing with 50 per cent. solution of glucose in a considerable number. This procedure was highly regarded for some time, and it gradually supplanted the use of formaldehyd solution and Dakin's solution.

TABLE 2.—RESULTS OF TREATMENT

	No.
Number of cases developing in this camp from July 1, 1918, to April 1, 1919	71
Number treated immediately by open drainage	68
Deaths	18
Recoveries with full lung expansion without secondary operations and returned to duty prior to April 15, 1919	36
Convalescent without secondary operation	2
Number subjected to secondary operation	10
Convalescent after secondary operation	4
Ambulatory patients presenting cavities of various sizes in the pleura	7
Bed patients ill with complications	1
*Cases treated primarily by the Mozingo method, subsequently by open drainage	3

*These are now ambulatory cases but have large suppurating pleural cavities.

Ward 3 was devoted entirely to patients with empyema, and the overflow was sent to Ward 6. All the experimental work with antiseptic solutions was done in Ward 3. In Ward 6 all patients presenting a high temperature were irrigated with physiologic sodium chlorid solution. Eighteen cases were treated in Ward 6, and it is an interesting fact that no death occurred in that ward.

Eventually the use of all irrigating solutions except that of physiologic sodium chlorid solution was abandoned in Ward 3. The ten patients treated with Dakin's solution and the formaldehyd glyerin solution were found after several months to have partially collapsed lungs and cavities of considerable size. They were subjected to secondary operations, and in each case a very thick layer of organized lymph was found holding the lung in a state of partial collapse. Ribs were removed and numerous incisions were made across the confining layer of lymph, and four of the patients are now convalescing, and the others are ambulatory and in good physical condition.

TABLE 3.—ORGANISMS FOUND IN PLEURAL FLUID

	No.
In fatal cases:	
Pneumococcus Type IV	8
Hemolytic streptococcus	6
Nonhemolytic streptococcus	1
Staphylococcus	1
In patients that recovered:	
Pneumococcus Type IV	19
Hemolytic streptococcus	10
Nonhemolytic streptococcus	3
Staphylococcus	2
In patients still in hospital:	
Pneumococcus	5
Hemolytic streptococcus	6
Nonhemolytic streptococcus	1

In connection with the consideration of the use of Dakin's solution in empyema I quote the following from a private letter received from Major F. C. Warnshuis, chief of the surgical service of Base Hospital No. 99, at Hyres-Var, France, who in the summer of 1918 was attached to this service:

> I thought I would be through with empyema when I left Sherman, but it seems *not*. Yesterday we received 260 surgical cases, among which were eleven active empyemas. These patients had been operated on from four to ten weeks before, and were about like the bunch we cleaned up at Sherman. There were in addition five cases healed. In going over their histories today I find that the eleven cases had been treated with Dakin's, while the five healed cases had not, so you see it is the same old story; and what gets *me* is that they can't see the harm done by Dakin's when introduced into the pleural cavity. I hope you comment strongly on the misuse of Dakin's solution in the treatment of empyema. I consider it a crime to use it.

Dec. 21, 1918, we received a report of the method adopted at Walter Reed General Hospital by Capt. A. E. Mozingo which he calls the "closed method." This consists in introducing a small rubber tube into the pleural cavity through a cannula or by puncture through the chest wall with a pair of forceps, evacuating fluid by suction with bulb syringe introducing Dakin's solution, withdrawing it again by means of a bulb and repeating this procedure at intervals of two hours for several days, after which formaldehyd glycerin solution is instilled through the tube after the irrigation with surgical solution of chlorinated soda. In the interval the tube is closed by shut-off, and no air at any time is permitted to enter the pleura. After obtaining the details of this treatment we received three new cases. We adopted the treatment in each case on the ninth day after the onset of pneumonia. All the patients were very sick and had large accumulations of seropurulent fluid, which was reported by the laboratory to contain hemolytic streptococci. In the first case pneumonia developed, December 19. Thoracotomy by the closed method was performed, December 28. Irrigations with surgical solution of chlorinated soda every two hours were continued for seven days, after which irrigations were done twice a day with instillations of formaldehyd glycerin solution until February 2, when the fluid was reported to be sterile and the thoracic opening closed spontaneously a few days thereafter. The second patient entered the hospital, December 4, with measles. Secondary pneumonia developed, December 18. Thoracotomy by the closed method was performed, December 27. The same after-treatment followed as in other cases, and the thoracic wound closed spontaneously, January 29.

The third patient developed pneumonia, January 5. Thoracotomy by the closed method was performed, January 14, and the wound closed spontaneously, January 25.

At this period we felt highly elated over this method of treatment, and hoped that a real advance had been made in the handling of this disease. The roentgen-ray laboratory reports were not reassuring, as each examination revealed gradually increasing amounts of fluid in the pleura, and no evidence was found that the collapsed lungs were expanding to fill the space. One month after the closure of the openings in the thoracic wall, the fluoroscope disclosed fluid in each case up to the level of the third rib. The aspirator revealed the presence of pus, which in one case resulted in a culture of hemolytic streptococci. In two cases, culture was negative. Rib resection was performed in these three cases, and very large cavities were discovered. The same firm-appearing layer of organized lymph confining the lungs in compression, as had been found in all the other cases treated by instillation of irritating antiseptics, was found. Negative pressure had been continuously applied to these cases by creating a partial vacuum in the cavity, commencing nine days after the onset of pneumonia, thus probably cutting short the infecting process, yet we were confronted with larger cavities than we had previously been called on to cope with in cases treated by open drainage. Many writers have claimed that Dakin's solution dissolves inflammatory lymph and thus hastens lung expansion. I have never seen any evidence of the correctness of this opinion. On the contrary, our observation leads to the conclusion that it, as well as formaldehyd glycerin solution, produces irritation of the serous membrane and promotes the formation of thick and resisting lymph deposits, assisting in blocking off the system from the infecting organisms, but in so doing effectually binding down the collapsed lung. It is greatly to be regretted that this is so, because it is the most agreeable method of treatment to use in the early stages. These three patients now have open wounds with considerable drainage therefrom, and the collapsed lungs give no signs of expansion.

The method followed to assist in the expansion of the lungs has been the blow-pipe method of blowing water from one bottle to another and in ambulatory patients the use of various mild calisthenic exercises. The water blowing procedure we regard as valuable. It has been used faithfully in all cases, including the three treated by the closed method, and it has been generally successful except in the cases in which the effect of irritating antiseptics has been the cause of the formation of thick layers of organized lymph over the compressed lung.

NECROPSY FINDINGS IN FATAL CASES

Case 1.—Empyema, right; rib resection, Oct. 29, 1918. The patient died, November 8. There was a small cavity of pus between the lung and the pericardial pleura. Small pus pockets were located in the mediastinal tissues. The pericardium contained 20 c.c. of turbid fluid. The left lung showed unresolved pneumonia. The right lung was practically solid.

Case 2.—Empyema, left; rib resection, Oct. 30, 1918. The patient died, December 5. After removal of all the thoracic viscera, an abscess was found on the left above the fourth rib containing 200 c.c. of pus. The pleural cavity below that point was drained. The pericardium was so adherent that in an attempt to separate it an opening was made directly into the right ventricle. The left lung was collapsed and firmly adherent. The right pleura contained 750 c.c. of watery fluid. A pus pocket 2 inches deep was found between the upper and the lower lobe of the left lung. The middle and lower lobes of the right sank in water. A small pocket of pus was found between the middle and the lower lobe. The left kidney was nodular in appearance. Purulent fluid exuded from the ureter.

Case 3.—Empyema, left; rib resection, Oct. 24, 1918. The patient died, November 7. The left pleura contained 400 c.c. of thick, milky, greenish yellow fluid. The right pleura was obliterated. Posterior and above the base was a pocket of purulent material. The pericardial sac contained 200 c.c. of clear, straw colored fluid. The left lung was small and sank in water. The lower lobe of the right lung posteriorly was covered with shaggy exudate. The posterior and lateral portions of the lower lobe were red and contained no air.

Case 4.—Empyema, right; rib resection, Oct. 30, 1918. The patient died, November 9. Beneath the sternum, overlying the pericardium, lay a pus pocket. The right pleural cavity contained a pocket of pus around the apex, limited by adhesions below at the level of the third rib. An adhesion extended back to the midaxillary line along the rib, and the pocket then extended downward and posteriorly to the base. There was a large abscess lying between the medial portion of the lower lobe and the pericardium. The left pleura contained 200 c.c. of bloody fluid. The pericardium contained 400 c.c. of clear fluid. The left lung was solid in the upper lobe.

Case 5.—Empyema, right; rib resection, Dec. 17, 1918. The patient died, January 1. The right lung was collapsed. Between the lung and the pericardial walls was a pocket of pus. The pelvis of the left kidney was distended and contained pus.

Case 6.—Empyema, right; rib resection, Oct. 30, 1918. The patient died, November 9. The right pleura was thickened and the cavity empty. Between the pericardium and the anterior portion of the lung lay a sealed off pocket of pus. The lower lobe of the left lung was dark, meaty red. There were scattered areas of gray hepatization. An interlobar abscess the size of a hen's egg lay between the middle and the lower lobe.

Case 7.—Empyema, Oct. 26, 1918; measles, November 7; rib resection, November 9, in the ward. The patient died, Jan. 7, 1919. The peritoneal cavity contained a large amount of greenish yellow pus. The left pleura presented dense, fibrinous adhesions. A walled off abscess formed a pocket extending from the second rib axillary line to the scapular line, with an area passing upward and backward to the vertebral column. The pericardial sac contained 25 c.c. of purulent fluid. An area of consolidation was found in both lungs. There were large amounts of thick, greenish pus in pockets between the coils of the intestine.

Case 8.—Empyema, right, Oct. 12, 1918; rib resection, October 21. The patient died, November 26. The right pleural cavity presented a pocket limited by a fibrinous coating attached to the lower border of the fourth rib. The pleural cavity below this point was obliterated. The right lung sank except at the extreme apex. The valves of the heart presented marked nodular thickening on their free borders. The aorta presented fatty degeneration about the base.

Case 9.—Empyema, right, Oct. 29, 1918; rib resection, October 30. The peritoneal cavity contained 600 c.c. of purulent fluid. The left pleural cavity contained 400 c.c. of purulent fluid. A large pocket lay above the fourth rib. The pericardium was thickened and contained 600 c.c. of purulent fluid. The stomach and intestine were covered on all surfaces with a plastic exudate.

Case 10.—The patient was admitted to the hospital, Oct. 30, 1918, for manic-depressive insanity. He had pneumonia November 4, and empyema, Dec. 9. Rib resection on the left side was performed December 12. He died December 19. The pleural sac was obliterated anteriorly. Posteriorly there was a pus pocket containing very little fluid. The pericardium was thickened and contained 200 c.c. of purulent fluid. The right kidney pelvis contained purulent urine.

Case 11.—Empyema, right, Dec. 31, 1918; thoracotomy by the closed method, Dec. 4. Dakin's solution was used until Jan. 1, 1919. Rib resection was performed January 8. The patient died January 29. The left pleural cavity contained 900 c.c. of fluid. The pericardial sac contained 20 c.c. of fluid. The right lung was densely adherent and sank in water. There was some pus in the peritoneal cavity.

Case 12.—Empyema, left, Oct. 25, 1918; measles, November 12; rib resection, October 28. The patient died, November 24. The left pleural cavity contained a small amount of pus. The right pleural was free of fluid. The lung was adherent to the pericardial pleura. The pericardial sac contained 480 c.c. of pus. Throughout all lobes of the lungs, shotlike nodules were palpated.

Case 13.—Empyema, left, Nov. 1, 1918; purulent pericarditis, November 13. The patient died, December 6. The pericardial sac was large and contained 1,000 c.c. of pus. The left pleural cavity was obliterated. At the posterior and lower border of the right lung there was an abscess cavity measuring 13 by 7.5 by 4.5 cm.

Case 14.—Empyema, left, Oct. 27, 1918; rib resection, October 28. The patient died, November 14. The right pleural sac contained 1,100 c.c. of serous fluid. The left pleura was thickened and contained no fluid. The lower lobe of the left lung sank in water. The right lung was covered on all surfaces by a fibrous exudate. Pockets of pus were found between the lobes.

Case 15.—Empyema, left, Oct. 27, 1918; measles, November 17; rib resection, October 28. The patient died, November 18. The right pleura contained 600 c.c. of purulent fluid. The pericardial sac was obliterated. The lower lobe of the left lung sank in water. The middle and lower lobes of the right lung contained firm nodules.

Case 16.—Empyema, right, Nov. 8, 1918; rib resection, November 23. The patient died, April 15, 1919. There was an empyemic cavity, 3 by 4 inches, well drained. Miliary tubercles were distributed throughout both lungs.

PATIENTS RECEIVED BY TRANSFER

In addition to the seventy-one cases originating in this camp since July 1, 1918, this service has received thirty patients by transfer from overseas and from other camps. Among these patients there were three who had been sick more than a year. One had pneumonia and empyema at Camp McArthur in the spring of 1917. He recovered and went overseas, and the sinus in the chest wall reopened eight months later. He had passed through many hospitals and had been operated on several times. When admitted here he had a large cavity with complete collapse of the lung. The ribs previously removed had reformed, presenting many fantastic forms. He was operated on here and did very well for a time, but died following a second operation which was not considered a severe one. Necropsy revealed advanced tuberculosis in the opposite lung. One of the other patients had taken sick on a transport in March, 1918, where he had remained until May, when he was landed in New York. He had passed through five operations, and still presents a discharging sinus from a small pleural cavity. The third one was a patient of Camp Dodge base hospital and General Hospital No. 26 for a year, and when admitted here had a discharging sinus from a large pleural cavity, which healed rapidly after resection of four ribs. Many of the overseas cases resulted from gunshot wounds.

Of the patients received by transfer, one died, fourteen recovered and were returned to duty, and fifteen are still in the hospital in good general condition, ambulatory and apparently convalescent.

It will be noted that none of our patients died of uncomplicated empyema, but rather from an intense general infection in which the pleural inflammation constituted but one factor in the case. It will also be noted that it is comparatively easy to render the pleural cavity sterile, but that such accomplishment does not mean the cure of the patient, and that no case should be pronounced cured until the expansion of the lung has produced contact with the thoracic wall and obliterated the infected space.

CONCLUSIONS

1. Empyema, as it has occurred in this camp, is but one element in an intense pneumococcic infection to which in many cases the streptococcus has been added without apparently influencing the progress of the disease.

2. The presence of fluid in the pleura is at first protective to the diseased lung, and it should not be

removed at an early period unless it is replaced, in part, by some other fluid.

3. If the patients survive the pneumonic process and the fluid becomes purulent, it should be drained through a large tube introduced after a rib resection under a local anesthetic, and under no circumstances should this procedure be adopted before the twelfth day of the disease, and so early as that only under exceptional circumstances.

4. Drainage having been established at the most dependent point in the cavity, irrigations with, or instillations of, irritating chemical solutions should be abstained from. If the drainage is adequate they will not be required. If not adequate, flushing with physiologic sodium chlorid solution will be all that will be required, and as soon as practicable, adequate drainage should be provided.

5. Attention is invited to the fact that this summary brings us to the adoption of the prewar theory of the surgical treatment of empyema, dismisses the theory so often advanced that a soldier requires different treatment than a civilian, and that the lung disease differs in any sense from the corresponding infection in civil life, except in the degree of severity caused by overcrowding, and relegates to the boneyard all of the many fancy treatments of empyema evolved by the faddists who have been privileged to observe a series of cases for a limited period of time. It has been my fortune to observe the final period of one epidemic of empyema and nearly the whole period of a second epidemic at this camp. I entered on the direction of the surgical treatment to be followed in the second epidemic with an open mind, without prejudice, and filled with a hope that formaldehyd glycerin solution instillation during the early stages of this disease would be beneficial. The use of Dakin's solution had been tested here in the first epidemic, and universally condemned by every surgeon who had handled it, and yet I insisted on its use in five cases by the open method and in three by the closed method with the results as stated above. I am now firmly of the opinion that the long established principles of surgery as evolved by many years of experience in civil life and enunciated in practically every textbook on surgery as the proper treatment of empyema has not been shaken from its foundation by any of the fads and fancies evolved during the war period.

Statistical Studies of the Influenza Epidemic Being Made by the U. S. Public Health Service.—Statistical studies are now being undertaken by the Public Health Service relative to the influenza epidemic. These studies comprise five main divisions: (1) special surveys to determine the incidence rate, type, duration and fatality of influenza in representative areas in different sections of the country in relation to color, age, sex, household congestion and time of occurrence; (2) detailed analyses of morbidity records available through state health departments to show chiefly the chronology, sex and age distribution of cases as reported; (3) preliminary analyses of records of epidemic mortality in a few states with reference to the mortality in various civil subdivisions by color, sex and age groups in successive periods of the epidemic; (4) a special inquiry into the nature and scope of preventive and relief measures adopted in larger cities to combat the epidemic. (5) In addition, certain compilations and analyses are being made from available published data, including current mortality statistics from certain foreign countries, and mortality from influenza and pneumonia in previous years in the United States. A special statistical office has been established under the direction of Surg. W. H. Frost and Statistician Edgar Sydenstricker, with Dr. Raymond Pearl of the Johns Hopkins University School of Hygiene and Public Health as consultant.

UNILATERAL ANESTHESIA OF THE CORNEA AND CONJUNCTIVA

A DIAGNOSTIC SIGN OF COMA DUE TO HEMIPLEGIA

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A physician may at any time be confronted with the necessity of determining the cause of coma; it is often difficult to say whether one is dealing with a postepileptic state, uremia, some toxic condition, or hysteria. We have found a sign which has been of great value in establishing the diagnosis of coma due to hemiplegia. It is known that in profound coma all reflexes are abolished; but in cases of moderate stupor or confused states this sign has helped to establish the diagnosis. The sign is a unilateral anesthesia of the cornea on the side of the hemiplegia, that is, the side opposite the lesion.

It has long been known and recently emphasized that the unilateral diminution, or absence of the abdominal wall reflexes, is an important sign of hemiplegia. We have found that in some instances, particularly in women with flabby abdominal musculature, it is difficult to elicit this sign. In such cases, and in all others for that matter, the unilateral absence of the corneal reflex is very helpful.

One must recall that the corneal reflex is a consensual reflex. The introduction of a foreign body into one eye produces a winking reflex in both eyes. This reflex is essentially protective, and apparently belongs to those mediated through the brain. It can be elicited by carefully passing a small blunt object along the conjunctiva to the corneal margin. One must guard against reaching the pupillary area because of the possibility of eliciting a visual reflex, which is present even in moderately stuporous cases. We have found this reflex absent in practically all hemiplegias with, and without, coma. We have not yet had occasion to study this sign in cases of crossed hemiplegia.

ABOLITION OF THE REFLEX

In looking through the literature we found only a single reference to this subject, one by Milian.[1] He attributed the loss of the reflex to the lesion of the facial nerve, that is, the motor arc, and he thought that in crossed lesions the abolition should occur on the same side as the facial paralysis. From our observations we must take issue with him, because if the absence of the reflex were due to interference with the motor arc, the consensual reflex should still be present on the other side. The sign should also disappear with the return of innervation of the facial nerve, which occurs in many cases. We have found, in our cases, no evidence of a consensual reflex, and, in some cases, we have been able to elicit the reflex on the paralyzed side by testing the cornea of the healthy side. This proved that the abolition of the reflex was not due to interference with the motor arc but due to the anesthesia of the cornea and conjunctiva.

The anesthesia of the cornea may be due to the presence of sensory fibers in the motor pathways, which are injured by the lesion causing hemiplegia, or, what seems more likely, is due to Monakow's diaschisis, with radiation of the insult to the sensory tracts. In cases with pure lesion of the motor tracts this sign tends to disappear after a few days. In lesions close to the thalamus, there is a tendency for the hemianesthesia to persist.[1]

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[1] Milian: Progrès méd. 25:229 (May 1) 1909.

Among our observations there have been many cases in which this has been the only sign of hemiplegia. In one case of what looked like a spasm of the cerebral vessels with transient right sided hemiparesis and doubtful Babinski, there was an absence of the corneal reflex on that side, thus proving the delicacy of this test for hemiplegia.

This sign should be especially valuable to the ambulance surgeon. It would help him in the differentiation of comotose states, so that he would not be too ready with the diagnosis of alcoholism. It is also very important from the standpoint of therapy. Given the diagnosis of hemiplegia, the treatment will necessarily be purely expectant, quite the opposite of the active treatment necessary for uremia.

There is only one condition that we can think of which would present difficulty in diagnosis. That condition is fracture of the base of the skull, involving the posterior fossa with injury to the trigeminus. In such cases, however, evidence of injury to the other nerves of the posterior fossa, the roentgenographic findings, the possible presence of blood in the spinal fluid, and the subsequent clinical course would help in the differential diagnosis. It is our hope that the test will be tried, and its value established through more extensive observation than our own.

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INTRAVENOUS INJECTIONS OF FOREIGN PROTEIN IN INFLUENZAL PNEUMONIA

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This report deals with the results from the intravenous injection of a foreign protein in eleven cases of influenzal pneumonia. Nine of the patients were critically ill and presented a grave prognosis. The protein used consisted of typhoid bacilli, macerated and exposed to the soluble action of alcohol for twelve hours, washed free of alcohol and suspended in physiologic sodium chlorid solution, the concentration being the equivalent of approximately three million bacilli per cubic centimeter. The dose employed was sufficient to produce a definite, so-called protein reaction, as a rule 1 c.c. Leukocyte counts were made previous to the injections, and from four to twelve hours following the reaction. In several cases blood chemistry determinations were made before and after the injections.

From thirty to forty-five minutes after the injections the patients experienced a typical protein reaction, characterized by a severe chill and moderate cyanosis, lasting from fifteen to twenty minutes and followed by a period of profuse sweating and marked elevation of temperature. Shortly following the period of sweating the patients invariably felt and appeared much improved. In several cases, notably Cases 2, 6 and 11, following the marked elevation of temperature, there occurred a rapid crisis with no subsequent rise in temperature, the patient going on to complete recovery.

Case 1.—Jan. 10, 1919, the patient developed influenza and Jan. 13 pneumonia involving both lower lobes was diagnosed. Bacteriologic examination of the sputum showed Type IV pneumococcus as the predominating organism. The patient received 1 c.c. of protein at 3 p. m., January 13. Blood pressure before the injection was: systolic, 124; diastolic, 68; one hour following the reaction: systolic, 132; diastolic, 68. The leukocyte count before the injection was 5,500, with 65 per cent. polymorphonuclear elements; six hours after the injection the count was 7,040. Blood chemistry of blood obtained four hours after the injection showed: urea nitrogen, 18.2 mg. per hundred cubic centimeters, urea, 38.2 mg. per hundred cubic centimeters. Carbon dioxid combining power of the blood plasma was 57 per cent. January 14, the leukocytes were 7,920. January 15, a second injection of 1 c.c. of protein was given. The leukocytes before the injection were 4,840, and seven hours after the reaction 6,380. This patient did not respond to the protein injections sufficiently to warrant its further use. Death occurred, January 19. In this case the slight increase in the number of leukocytes can probably be attributed to the protein injected; but the increase was not at all commensurate with the severity of the reaction that occurred following the injection. The slight increase is probably due to the marked inhibition of the leukocytic-forming organs because of the toxins resulting from the infection.

LEUKOCYTIC REACTION FOLLOWING THE INTRAVENOUS PROTEIN INJECTIONS IN ELEVEN CASES OF PNEUMONIA

Case	Day of Injection	Leukocytes Before Injection		Leukocytes After Injection		Hours after Injection	End-Results	Type of Case
		Total Number	Polymorphonuclears, per Cent.	Total Number	Polymorphonuclears, per Cent.			
1	1/13/19	5,500	65	7,040	..	6	Death	Critical
	1/15/19	4,840	..	6,380	..	7		
2	1/13/19	3,740	..	10,560	..	6	Recovery	Serious
3	1/23/19	5,720	82	15,840	95	4	Empyema and death	Critical
	1/24/19	.....	..	13,640	86	4		
	1/25/19	.....	..	11,660	90	6		
	1/30/19	9,900	88	17,600	72	6		
4	1/16/19	6,160	..	7,920	..	4	Death	Critical
	1/17/19	2,420	..	7,700	..	4		
5	1/20/19	8,360	..	14,300	..	12	Recovery	Serious
6	1/28/19	4,840	65	5,500	..	12	Death from empyema	Critical
	1/30/19	5,720						
	2/ 1/19	9,900	70	17,820	68	6		
	2/ 2/19	14,740	79	16,720	81	6		
7	1/19/19	5,940	71	4,840	..	2½	Recovery	Serious
8	2/12/19	3,960	78	3,740	72	12	Recovery	Mild
9	1/26/19	.....	..	5,500	68	2	Recovery	Mild
10	3/31/19	3,960	68	7,260	70	9	Recovery	Serious
	4/ 1/19	.....	..	6,820	78	3		
	4/ 2/19	7,040	77	4,840	91	4		
11	1/22/19	6,380	83	16,720	..	10	Recovery	Serious

Case 2.—Jan. 7, 1919, the patient developed influenza, and January 13, bronchopneumonia involving both lower lobes was diagnosed. January 13, 1.5 c.c. of protein were injected intravenously. Forty-five minutes later there occurred a severe chill lasting twenty minutes, followed by profuse sweating. The findings in the blood before injection were:

Creatinin, 2.10 mg.; urea nitrogen, 17.2 mg.; urea, 36.8 mg.; uric acid, 6.0 mg. per 100 c.c. Carbondioxid combining power of the blood plasma 48 per cent.; leukocytes, 3,740; blood pressure, 112-64.

The blood findings six hours after the injection were:

Creatinin, 2.00 mg.; urea nitrogen, 16.3 mg.; urea, 34.88 mg.; uric acid, 5.00 mg. per 100 c.c.; leukocytes 10,560; blood pressure, 134-80.

In this case the temperature dropped to normal ten hours after the injection and the patient went on to a complete recovery.

Case 3.—Jan. 18, 1919, the patient developed influenza and January 22, pneumonia involving both lower lobes was diagnosed. January 23, 0.75 c.c. of protein was given intravenously. Leukocytes before the injection were 5,720, with 78 per cent. polymorphonuclear elements; four hours after the injection the count was 15,840, with 95 per cent. polymorphonuclear elements.

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[1] It is, of course, understood that the anesthesia of the cornea and conjunctiva is only part of a cortical hemianesthesia, and the value of the sign depends on its absolute objectivity.

Blood chemistry before this injection showed:

Creatinin, 1.01 mg.; urea nitrogen, 20.7 mg.; urea, 44.29; uric acid, 3.65 mg. per 100 c.c. Carbon dioxid combining power of the blood plasma was 51 per cent.

Second and third injections of the protein were given, January 24 and January 25, maintaining the leukocyte counts around 12,000 and the percentage of polymorphonuclear elements between 85 and 90. January 30, the leukocytes had dropped to 9,900. A fourth injection was given on this day, which increased the count to 17,600, with 72 per cent. of polymorphonuclear elements. January 31, a serofibrinous pleurisy was diagnosed. February 5, operation was performed for empyema; death ensued, February 8. After January 31, the leukocyte counts remained over 20,000 and no further injections of protein were indicated. Chart 1 shows the temperature reactions following the first three protein injections.

Case 11.—Jan. 16, 1919, the patient developed influenza and January 21, bronchopneumonia involving the left lower lobe was diagnosed. January 22, 1 c.c. of protein was given intravenously, which was followed in forty-five minutes by a severe chill. The leukocytes before the injection were 6,380, ten hours after the injection the count was 16,720. Following the reaction the temperature dropped to normal and remained so until the patient was discharged from the hospital.

Eleven cases were available for this study. With two exceptions cases were selected that were critical and in which leukocyte counts were definitely of the leukopenic type, the aim being, if possible, to provoke a leukocytosis. Because of the few cases, the results, on paper, are not as convincing as they might otherwise be. Of the eleven cases, eight showed, following the injections, an increase in the total number of leukocytes, only five however an increase worth noting. In those cases showing a marked increase there was noted an increase in the proportion of the polymorphonuclear leukocytes. The three cases in which only a slight increase in the number of leukocytes occurred resulted in recovery. The two mild cases included in this series ended with recovery. Of the nine cases remaining, four resulted fatally; two, however, from empyema, after the development of which protein injections were not made, as a high leukocyte count had developed as a result of the complication.

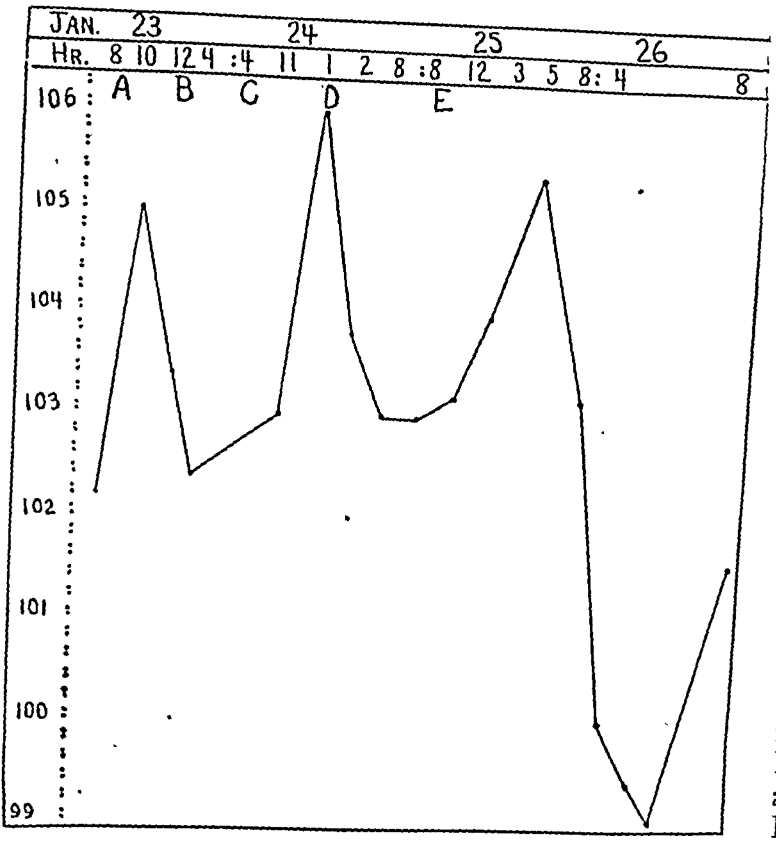

Chart 1 (Case 3).—Temperature reaction following three injections of protein: *A*, leukocyte count, 5,720; intravenous injection of 0.75 c.c. of foreign protein; *B*, leukocyte count, 15,840; *C*, injection of 1 c.c. of foreign protein; *D*, leukocyte count, 13,640; *E*, leukocyte count, 11,600; injection of 1 c.c. of foreign protein.

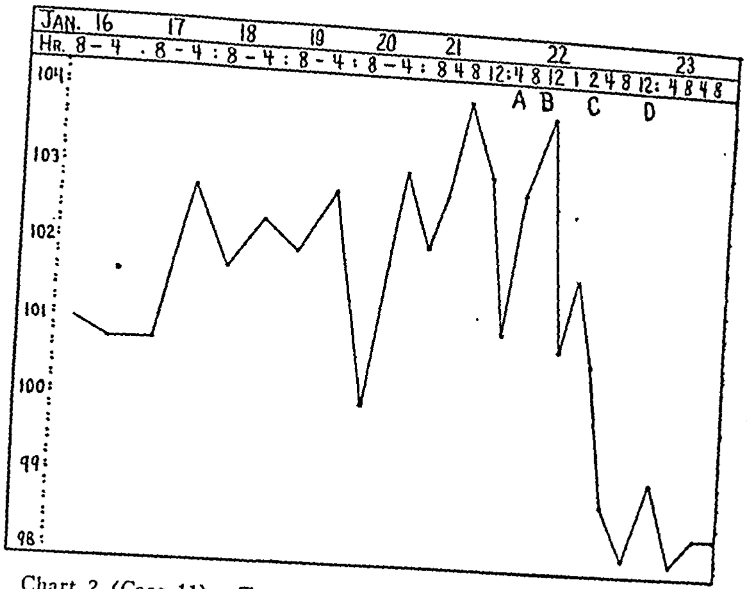

Chart 2 (Case 11).—Temperature reaction following protein injection: *A*, leukocyte count, 6,380; injection of 1 c.c. of foreign protein; *B*, marked chill, 11 a. m.; *C*, leukocyte count, 16,720; *D*, temperature normal.

So far as could be determined, the intravenous injection of typhoid protein has no deleterious effect, as regards an increased retention of the products of katabolism. This finding is in accord with the results obtained with the use of other protein extracts by McQuarrie and Whipple.[1] Mackenzie has mentioned the occurrence of diminished blood pressure following the injection intravenously of certain proteins. In this series two cases showed an increase in blood pressure, while the others investigated in respect to this point were normal.

Metschnikoff and his school have emphasized the importance of the polymorphonuclear leukocytes in natural and acquired immunity against bacterial infections. The medical profession has long attached considerable prognostic importance to a high leukocyte count, particularly in pneumonia. Recognizing the occurrence of a low leukocyte count in the blood of a vast majority of the influenzal pneumonias, it seemed logical, from the above point of view, to attempt to stimulate an increase of these cells in this condition. The occurrence of a leukocytosis following the injection of certain proteins has been demonstrated by many investigators. The results obtained by Miller and Lusk, and others, in their intravenous use in arthritis; and their use in pneumonia by the writer and the late Dr. Mathers (results not published), led us to apply them in the condition which is the subject of this paper. Those who have had experience with pneumonia following influenza appreciate the grave condition present in a certain percentage of these cases, in which the use of all previously known measures of treatment have been futile. This fact warranted the attempt made in this study.

Recently, Roberts and Cary[2] reported the use of intravenous injections of heat-killed pneumococcus, streptococcus, staphylococcus and influenza bacilli in cases of influenza, in an attempt to abort pneumonia. These writers state that no untoward results followed such injections, and concluded that in their opinion protein injections have a definite therapeutic value in the disease under consideration. It is our opinion, based on the above-mentioned eleven cases and some experience with intravenous protein therapy in primary pneumonias, that the intravenous injection of foreign protein is efficacious in selected cases when made by one thoroughly conversant with all the possibilities of the therapy. Such injections, however, should not be employed as a routine by the general practitioner.

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[1] McQuarrie and Whipple: Jour. Exper. M. **29**: 421, 1919.

[2] Roberts and Cary: Bacterial Protein Injections in Influenzal Pneumonia, J. A. M. A. **72**: 922 (March 29) 1919.

NEWER METHODS FOR RADIUM TREATMENT OF PROSTATIC AND VESICAL CANCER

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Since the early publications of Pasteau[1] and co-workers highly commending the use of radium for prostatic cancer, many eminent urologists—Barringer and Keyes, Marion, Young and others—have reported encouraging and hopeful results in the treatment with radium of both prostatic and vesical cancer.

The methods of use for cancer here, and of other parts of the body, have been practiced sufficiently long to establish certain principles. In the first place, it is important to control the dose of radiation by proper screening, accurate placement and limitation of exposure, so that radium burns may not be produced. In the second place, close approximation of the radium element to the area for radiation gives far better results than radiation at a distance, even when enormous doses are thus used.

METHODS OF TREATMENT

Various methods have been adopted by the different advocates of radium. The simplest is the ordinary rubber catheter as used by Pasteau, and now in common use, by which the radium may be placed in the rectum, the urethra or the bladder. The radium capsule in the catheter end may be directed fairly well by a stylet, or, with the bladder empty, the area to be treated may be presupposed to come into contact with the catheter end containing the radium, on its simple insertion. As suggested by Barringer,[2] tumors on the anterior wall or on either lateral bladder wall of the bladder may be more directly placed in contact with the radium by having the patient lie on his stomach or on the respective side involved, so that the radium capsule will come by gravity to lie over the tumor area. Barringer places the radium capsule in the bladder through the sheath of the cystoscope, which is then withdrawn, and the capsule is allowed to remain from six to ten hours. It is removed by means of a thread left hanging through the urethra.

For cancer of the prostate, Barringer plunges long needles through the perineum directly into the prostate, leaving them about twelve hours, the patient being under local anesthesia. Marion[3] uses a large hydrocele trocar in a similar manner, plunging it through the perineum, its point being guided by a finger in the rectum. The needle obturator is then removed and the radium capsule, with silver wire attached, is pushed through the sheath into the prostate, and the trocar is withdrawn. The capsule can be pulled out at the desired time by means of the wire. Burrows[4] has devised a special trocar with a slot for these particular perineal radium treatments. Young[5] has utilized the principles of his cystoscopic rongeur, and devised several instruments by means of which the radium tubes may, under direct cystoscopic vision, be accurately placed on bladder tumors, and then held in position by means of a mechanical arm attached to the cystoscopic table. For treatments per rectum he uses a special instrument shaped much like a sound, the end of which, containing the radium, is placed with the finger at the point desired and, with the patient lying on one side, held in place by a mechanical arm attached to the table. Young's methods for the bladder, by their added accuracy, diminish the likelihood of radium burns and enable the safe use of more frequent applications.

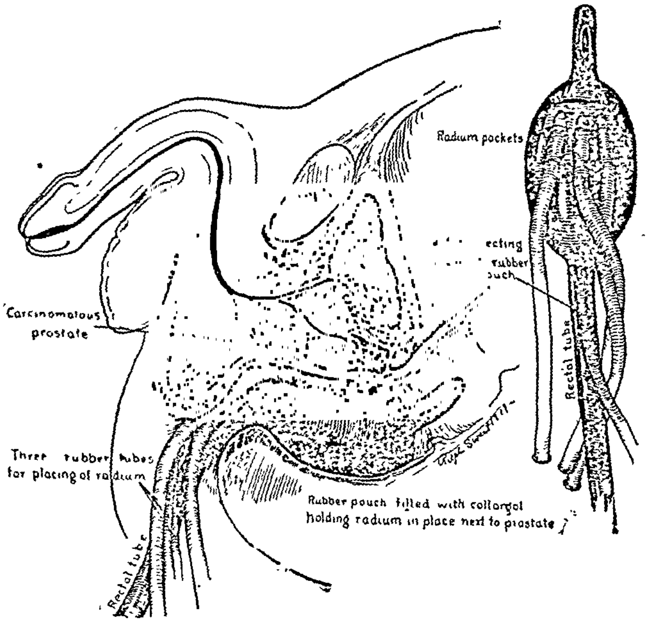
Radium pockets
ecting
rubber
ouch
Carcinomatous prostate
Rectal tube
Three rubber tubes for placing of radium
Rubber pouch filled with collargol holding radium in place next to prostate
Rectal tube

Fig. 1.—Apparatus for treating carcinomatous prostate by rectum.

USE OF INSTRUMENTS

In the treatment of eight cancerous prostates, I have had rectal burns in three patients. The radium has been inserted in a catheter and held in place by means of a heavy wire stylet, in a manner similar to that used by Young. Few patients can remain quietly in one position for the required period. In order to protect the walls of the rectum not required to be exposed to the rays, and to relieve the patient of the effort of remaining for hours in one position, the instrument shown in Figure 1 has been satisfactorily used during the last year in the treatment of four patients. The radium is first placed in the radium pockets. The amount of radium and the pocket used depend on the point of radiation desired—whether prostate or left or right vesical area—and on the type of case and previous treatments. The pouch is then inserted while collapsed, and the radium pocket or pockets are accurately placed at the desired position by a finger in the rectum. Collargol, or some solution impermeable to the rays, is then injected into the pouch, the amount of distention desired being known by previous measurement, and the injection tube is clamped. The distended bag pushes the radium pocket snugly against prostate or vesical wall and holds it in place irrespective of the position of the patient. The rectal tube perforating the bag allows the passage of intestinal gas, so that the bag may be retained for hours without discomfort. The solution in the bag furnishes a filter which thoroughly protects all portions of the rectum except the small area directly in contact with the radium pocket.

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[1] Pasteau, O.: Traitement du cancer de la prostate par le radium, Rev. des neal. de la nutrition, August, 1911, p. 363. Canhopé: Radium et cancer de la prostate, Thèse, Paris, 1911. Pasteau, Wickham and Degrais: 2e Conf. intern. pour. l'étude du cancer, Paris, 1910, p. 707. Pasteau and Degrais: De l'emploi du Radium dans le traitement des cancers de la Prostate, J. d'urol. méd. et chir. 4: 341, 1913. Pasteau, Degrais and Bellat: Modifications cliniques et histologiques d'une tumeur de la prostate sous l'influence du radium, Assoc. franc. pour l'étude du cancer, July, 1913.

[2] Barringer, B. S.: Radium in the Treatment of Cancer of the Prostate and Bladder, J. A. M. A. 67: 1442 (Nov. 11) 1916; ibid., 68: 1227 (April 28) 1917.

[3] Marion, G.: D'un moyen simple et facile d'appliquer le radium dans le cancer de la prostate d'urol. méd. et chir. 7: 335, 1917-1918.

[4] Burrows, Arthur: Lancet 1: 548 (April 7) 1917.

[5] Young, H. H.: The Use of Radium in Cancer of the Prostate and Bladder, J. A. M. A. 68: 1174 (April 21) 1917.

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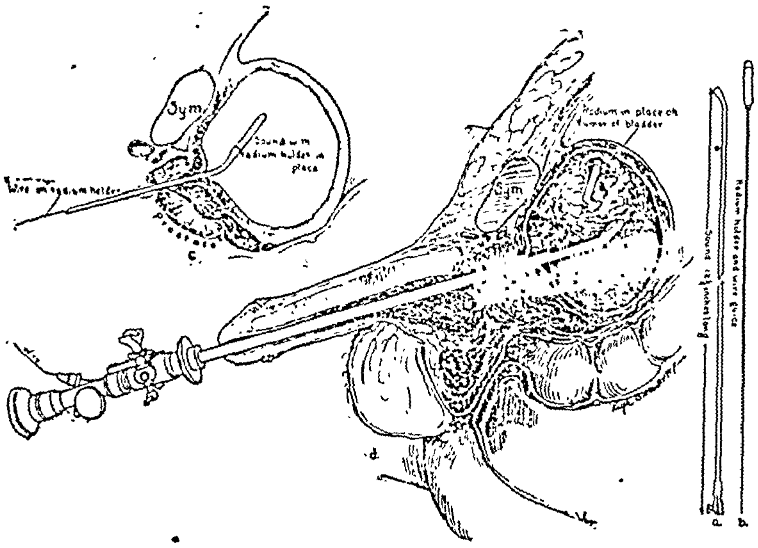
Sym
Sound with radium holder in place
c.
Radium in place on tumor of bladder
Sym
d.
Radium holder and wire guide
a.
b.

Fig. 2.—Apparatus for the treatment of vesical cancer; *a*, holder for radium capsule; *b*, wire, with the radium capsule attached, to be threaded into *a*.

516 Sutter Street.

ANGIONEUROTIC EDEMA

REPORT OF CASE

EDWARD T. EDGERLY, M.D. (Ottumwa, Iowa)
Major, M. C., U. S. Army
CAMP DODGE, DES MOINES, IOWA

AND

FRANK B. LUSK, M.D. (Chicago)
Captain, M. C., U. S. Army
FRANCE

The case reported, while in the main one of angioneurotic edema, differs from the type commonly seen in that it embodies in its manifestations almost all the features of this disease. Its decided hereditary tendency, its appearance early in life, its persistent and frequent attacks, with pronounced local and general manifestations and a clinical course at times suggestive of an acute infection, stamp it as unusual. The possibility of confusing it with the expression of some sudden severe systemic derangement, the protean manifestation of some vascular disturbance such as acroparesthesia, or classifying it as the familial type of edema described by Edgeworth or even as Milroy's disease is not unlikely.

REPORT OF CASE

History.—L., a white man, aged 24, born in Missouri, where he resided until his induction into military service, entered the base hospital at Camp Dodge, July 24, 1918, with the provisional diagnosis of "edema, origin undetermined." The attacks, he stated, began July 22, 1918, two days before admission, with a feeling of fulness and tension of both palms and soles accompanied by slight tingling and numbness. The following morning he awakened to find both hands, forearms, feet, legs, and thighs one-half again their natural size. The genitalia also were very much swollen. On the afternoon of the same day both upper and lower eyelids, cheeks, and, to a lesser extent, his tongue, became involved so that sight was almost impossible and speech and mastication difficult. The parts previously described continued swollen. The condition gave rise to but little discomfort, although the inconvenience of being unable to put on his clothing and shoes and the inability to use his hands incapacited him for his routine duties.

Physical Examination.—On the third day, that of admission to the hospital, the swelling subsided to some extent. The patient was 5 feet and 10 inches in height, weighed 175 pounds, and though not robust was not of an unhealthy appearance. All organs such as the eyes, ears, heart, lungs, and abdominal viscera were free from any palpable abnormalities. The eyelids exhibited an appearance such as one might expect in an edema the result of an acute diffuse nephritis. The cheeks and skin of the neck were puffy, but did not pit on pressure, while the tongue was grossly thickened but otherwise normal. The skin of the chest and abdomen, while of a fine texture, appeared thickened. It was somewhat blanched, dry and tense, with slight pitting on pressure. The skin of the upper and lower extremities presented much the same general phenomena, but the feet and hands were shiny, having a tense, slick appearance. They felt cold and clammy, and were a dark, dull, purplish red, with here and there a bit of white mottling. Moderately firm pressure resulted in some pitting, lasting from one to three minutes, while the subsequent blanching disappeared immediately, leaving a decidedly erythematous area. There was no dermographia or itching.

This attack lasted in all six days, disappearing gradually. Subsequent to this he had five attacks of from one to three days' duration during the six weeks of observation in the hospital. All were less severe, and each differed in some respect from the one described. In some the onset and duration covered only a few hours, while in others merely the hands were involved. These sometimes were very white and warm, at other times red and cold with numbness, tingling, and formication.

On the day of his admission, his temperature was 101.6 F., pulse 78, respiration 20. The red blood count was 4,780,000, hemoglobin 100 per cent. (Sahli), and the white blood count 20,000 with no noteworthy changes in the differential count. The blood pressure was 115 systolic and 85 diastolic. The following day the temperature, pulse and respiration were normal, and the white blood count fell to 9,000. In the second and fourth attacks there was again some rise in temperature and a moderate increase in the number of leukocystes. The urine, stool and blood Wassermann test were repeatedly negative, as were roentgenographic examinations of the gastro-intestinal tract, the sella turcica and the bones of the extremities. Neurologic examination was negative.

Past History.—The patient had been free from previous diseases, including nervous and venereal diseases, nor could there be elicited any history of dietetic or gastro-intestinal disorders. He was told by his parents that even in early childhood he had had similar attacks, occurring as frequently as two or three times a year. His own recollection dates back to the age of 14 years, at which time an attack not unlike the present occurred; but at that time he had in addition a markedly swollen tongue which seemed to fill his mouth completely, severe dyspnea, so that he feared choking to death, and abdominal cramps, without, however, any diarrhea. This attack fluctuated in severity from day to day, lasting in all fifteen days and undergoing a gradual decrudescence. He had had but one other such attack, which occurred when he was 17. Minor attacks, however, as the one described above, have been frequent, occurring as often as once a week. The onset of these covered from two to twenty-four hours, and lasted, in all, from twenty-four hours to three days.

Family History.—The grandparents on both sides died in old age. The mother and father are living and well. One uncle, the father's brother, has three children; the second, a boy of 24, has had several attacks of the same disorder. In the immediate family there are seven children.

The oldest, a sister of 36, occasionally has manifestations in which only the feet and hands are involved. A brother, aged 31, has attacks similar to those of this patient, with frequent involvement of the chest, marked dyspnea, "choking spells," and abdominal cramps. Another brother, aged 29, is living and well. A sister, aged 26, having at present pulmonary tuberculosis, is affected with the same disease to only a moderate extent. Two other brothers, aged 18 and 10, have always been in good health.

Triumph of Medicine in the War.—How important is the part that medicine plays in national welfare has been strikingly shown in the recent war. Whatever may be the verdict of history on the diplomatic, political, naval, military and economic phases of the war, there will be no hesitation about the brilliant triumphs of curative and preventive medicine. These triumphs have been partly the outcome of the researches and investigations of contemporary workers, not only in the science and art of medicine but also in the allied sciences of chemistry and physics and biology; but the victory was eventually ensured by the thousands of trained workers who knew how to make full use of all the resources which these sciences had placed at their disposal. Medical men of different nationalities, sometimes of different races, reared under different educational and social systems, were able to cooperate in the common endeavor, because they had all alike inherited the same traditions of rational medicine.—Tweedy, *Brit. M. J.* 2:597 (May 17), 1919.

THE OPHTHALMOLOGIST AND THE PHYSICIAN *

CHARLES P. EMERSON, M.D.
Dean and Professor of Medicine, Indiana University School of Medicine
INDIANAPOLIS

Each decade presents to the medical man a new problem; that is, the advancing edge of his science is ever shifting. Progress at one point permits of progress at other, formerly quieter zones. Twenty years ago a large group of medical patients were not well treated. "Neurasthenics" they were called, or, if they seemed likely to resent that name, they were assured that they were "only nervous," that they "had no organic trouble." The average general practitioner did not know how to help them, and so by his unsympathetic attitude he drove them into the churches and offices of various sects antagonistic to medicine.

The improved methods of diagnosis and the great recent advances in our knowledge of the functional neuroses have, however, proved to us that very many of these patients can be helped, some very easily. Many complain of easy fatigability alone, which may be due to various common diseases in their earlier stages before any characteristic symptoms have appeared, usually diseases of the central nervous system or of the cardiovascular-renal organs. Several other groups may be separated; but only one interests us now, a large group of patients with no real disease but who are handicapped by some mental or physical defect, often permanent in character, which leads to symptoms which the patient accepts as a part of his life and which may in time, because of the fatigue and suffering produced, lead to nervous or even to mental breakdown. The conditions which this group of patients presents are very complex. Several factors work conjointly in the production of symptoms, but one is so important that I invite you to discuss it now with me. I refer to eyestrain in persons whose nervous makeup is such that this strain alone can lead to results of greater or less importance, or at least can modify a syndrome produced by some other injuring factor. I would avoid emphasizing eyestrain as the sole cause of any symptom. In these cases it usually is not. The real cause is more likely to be in the neuropathic disposition of the patient himself. These patients all deserve careful and sympathetic study, since many are greatly relieved by the proper correction of errors of refraction. The point, however, which now I would make is that these patients cannot be helped by the ophthalmologist alone any more than by the internist alone. He requires their combined efforts. I invite you today to such consultation with the subject of eyestrain as our patient. I would not for one moment claim that the subject is new. Nearly every symptom and disease from heterodoxy in religion to ingrowing toenail has been ascribed to eyestrain. It would not be wise before this audience to increase this list without good reason, but an intensive study of certain indirect results may be timely, for only by such studies can we improve our methods of diagnosis and increase our efficiency in treatment.

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* Read before the Section on Ophthalmology at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

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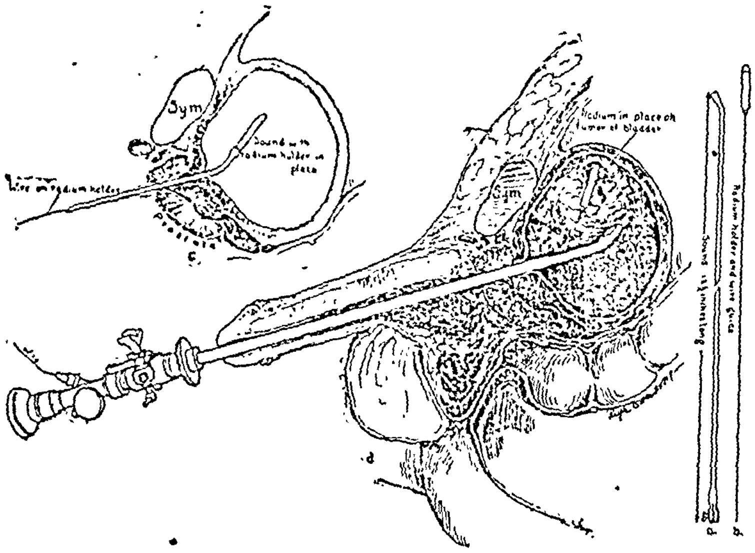
Sym
Sound with radium holder in place
Wire on radium holder
Prostate
c
Sym
Radium in place on tumor of bladder
d
Sound 15 inches long
Radium holder and wire guide
a
b

Fig. 2.—Apparatus for the treatment of vesical cancer; *a*, holder for radium capsule; *b*, wire, with the radium capsule attached, to be threaded into *a*.

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METHODS OF REFRACTION

And now please allow me to speak of your methods of refraction. I know that this is not the field of the internist; but it is his patient whom you are examining, and he is intensely interested that you succeed. His difficult cases form so small a percentage of your practice and take so much of your time that you would often prefer not to bother with them. But they are the most of our practice, and we need your help. We ask you, therefore, to consider refraction as the highest expression of your art, not as a necessary evil to be endured or handed over to a junior associate. Give it your best thought. Please be patient; your responsibility is great. We know often from watching you whether or not you will succeed with our patient, so pardon us if we ask you to consider these suggestions.

To begin with, it is fundamental that you first of all determine accurately the static error and all of it. Don't worry: we shall not ask you to correct all of it; but we do ask that you determine all of it before you plan to correct any of it. To do this requires complete paralysis of the muscles of accommodation. Homatropin may be satisfactory for the patients who come to you directly. I don't know anything about them; but if correction is intended to correct more than blurred vision, please use atropin, if possible. We think your use of cycloplegics is often a good deal of a farce. We ask you to determine the entire error, no matter how slight it is, no matter whether it disturbs vision or not, no matter whether you think it important or not. Those ophthalmologists who have helped us most always begin with a careful retinoscopic examination in order to get the general lay of the land and to guard against a gross error which the patient has learned to suppress. They insist that the distance from the patient when the retinoscopy is performed
hould be accurately measured and not estimated each
e. Then, as the court of last appeal, they use the
ective tests to confirm this result and add details.
comes the question of muscle balance, muscle
h, ciliary hypertrophy, etc.

is point I would urge you not to fatigue the
o much. In colorimetric work we do not
tudent to use one eye more than fifteen
time, and require that he determine this
ely with a watch. While the fatigue
ction test may not be as rapid, yet we
is important and does explain some
arder some of our friends try, the
; for the more pains they take,
they work, the more fatigued
he static error accurately determined, the tests repeated and checked up, then the question arises, How shall we meet it? and in answering that please allow us some voice. The formula of the error does not mathematically determine the formula for the glasses. Three men agreeing on the error might differ markedly in the glasses they would prescribe, and their differences would probably depend on their estimation of the patient, and we know our nervous patient much better than can you. In the case of your average patient you may follow certain general rules with average good results. But these cases I am now discussing are not average cases, and we internists who have examined them as individuals, not as seeing mechanisms, know well that you can make or break our chances of helping them. Some of these patients are hyperesthetic, some rather anesthetic; some are hypertonic, some more atonic. I remember one ophthalmologist who watched the patients as they walked to his chair, noted their stride, their posture, their snap; who pinched their arms to determine their muscular tonicity, and who talked to them to form some estimate of their mental tone. Do you? We have struggled with these same persons before we referred them to you. Cannot ophthalmologist and internist talk over the patient and together decide concerning the correction to be prescribed? You will need to teach us a great deal before we can help you much, but we are confident that if you will teach us how we can help them our patients will profit much as a result. Tonsils are no longer a local problem. The specialist in diseases of the throat has learned to discuss them in terms of heart, joints and kidneys. The nose is no longer entirely a local problem, for the rhinologist now consults with internists concerning the patient's asthma and dysmenorrhea. The internists now are struggling to relieve patients with neurasthenic reactions, and we ask you to come over into the field of neurologic ophthalmology and help us.

NECESSARY BUT OFTEN NEGLECTED REFINEMENTS IN EXAMINATION OF OCULAR REFRACTION *

WALTER L. PYLE, M.D.
PHILADELPHIA

The examination and correction of errors of ocular refraction may be called an art. Preparatory scientific study is, of course, necessary; but without the proper mental attitude—an absolute belief in the importance of correcting small refractive errors, the best work is not possible. Long practice, infinite care, and attention to finer details are imperative requisites. It is an established fact that many of the worst sufferers of ametropic eyestrain are the subjects of small optical errors. Astigmatism is the important defect, and on its proper diagnosis and treatment rests most of the ophthalmologist's success.

A slight fault in the correction of refractive errors aggravates rather than relieves the accompanying asthenopic symptoms. By applying sufficient optical aid to allow the ciliary muscle to compensate perfectly for the uncorrected refractive defect, continuous rather than intermittent ametropic eyestrain is established.

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* Read before the Section on Ophthalmology at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

THE TRIAL FRAME

The prime requisites for the trial frame are rigidity, lightness, proper position on the face, and ease of general adjustment and manipulation of the trial lenses. There is also a necessity for individual adjustment of the two sides, to permit perfect binocular centering. The ideal trial frame would also allow independent bilateral, vertical and anteroposterior adjustments; but this would necessitate too much mechanism, and would be too expensive and too heavy. Such complicated construction is not necessary in ordinary office work.

It is most important that the trial frame shall be firmly and snugly placed on the sides of the nose and adjacent cheeks, in approximately the position in which the prospective spectacles or eye glasses will be worn. In this respect all frames fixed to mechanical instruments, such as optometers, are at fault, are often clumsy, and are signally deficient for accurate testing. The frame should be grooved and slotted to allow rotation of the cylinders at least 180 degrees. The rotation should be effected by light contact with the tip of the first finger. It is impossible to practice noiseless and smooth rotation, when using cells without handles. The placing of the trial lenses in the spring clips is awkward, disconcerting to the patient, and trying to the oculist. Only by the use of a properly grooved and slotted trial frame can the ideal examination of the refraction be made.

The ordinary trial frames seldom conform to the modern standards of skilful medical refractionists. In hospitals and dispensaries they are especially faulty and often ludicrous. For many years I used one of three trial frames made under the direction of Dr. George M. Gould. In 1917, I showed to this section a modification of this trial frame conforming to the modern requirements, but it was lacking in the necessary central universal adjustment. Last year, I exhibited at a meeting of the American Ophthalmological Society an improved trial frame having a universal vertical and horizontal adjustment by rack and pinion, placed in the center of the frame, permitting adaptation for any peculiar facial conformation.

The frame is grooved for two lenses. The front groove, for the cylinders, is slotted to allow rotation of the cells with handles. A third test lens may be placed in front of the frame, resting on three small hooks. The test lenses, carefully centered, should be placed before the eyes, properly inclined, and just clearing the eyelashes. The bridge of the frame should not wound the skin or cause irritation or pain. Rotation of the cylindric lenses must be easy, silent and unnoticeable, to prevent even momentary diversion of the patient's attention.

The bilateral independent adjustment is effected by two double screws, operated on the upper outer sides of the frame. The frame is placed on the face, quickly set by the universal adjustment, and supplemented when necessary by movement of the independent double screw adjustment, until the lenses are properly centered. Broad shell coverings on the inner sides of the two cell holders permit the snug application of the frame to the sides of the nose and cheeks. The nose piece proper is used only to fix and maintain the proper position. The graduated semicircles are enameled in dull black, and marked with distinct white lines and figures, allowing the maximal ease in reading the axes. The whole frame is finished dark and dull to prevent annoying reflections.

CYCLOPLEGICS AND MYDRIATICS

Unless they are contraindicated by age or disease, I always use a cycloplegic and mydriatic in the examination of refraction. Cycloplegia permits study of the static refraction, and mydriasis facilitates retinoscopy and ophthalmoscopy.

My routine custom is to instil from 1 to 6 drops of a solution containing homatropin hydrobromate, 2½ grains; cocain hydrochlorate, 1¼ grains; distilled water, 2 drams. I use this cycloplegic personally and exclusively in my private office, and never prescribe it for home use. If more than 1 drop is necessary, I instil the additional drops at intervals of fifteen minutes. I seldom use more than 4 drops. The cycloplegia may be partly corrected by the instillation of 1 drop of a 0.5 per cent. solution of physostigmin salicylate. Beyond a sense of slight twitching, there is no objection to the counteracting drop. In many thousands of cases, I have never seen severe untoward results from inducing cycloplegia according to the foregoing method.

Only occasionally for therapeutic purposes do I ever use a stronger cycloplegic; and then I prefer a 1 per cent. solution of atropin sulphate.

1931 Chestnut Street.

THE PRESENT STATUS OF REFRACTION WORK *

E. J. GARDINER, A.B., M.D.
CHICAGO

Following the track sparsely blazed by Young, Whewell, Ware and Airy, Donders cleared the ground and laid the foundations of modern ophthalmology. The obstructions in his path were many and formidable, but his genius enabled him to surmount them, and his epoch-making book on "Accommodation and Refraction of the Eye" at once raised ophthalmology from a purely empiric practice to a quasiexact science. When one considers that up to his time the true nature of hypermetropia, myopia and astigmatism was unknown, that asthenopia was classed as a disease, and that the instruments at his disposal were few and crude, one marvels at the mind that was able, out of this slough of ignorance, to evolve a science that immediately placed ophthalmology at the forefront of the medical specialties. How accurate and exhaustive were his investigations, and how sound were his conclusions is evidenced by the fact that although, since his day, a complicated superstructure has been raised on the foundation that he laid, not one stone thereof has been removed.

Since the publication of Donders' work until the present time, the ingenuity of ophthalmologists has been hard at work improving old instruments of precision and devising new ones, with the result that today our armamentarium is so extensive that there are few problems pertaining to the detection and measurement of muscle anomalies and errors of refraction for the solution of which there are not one or more excellent devices.

The question is, What are we doing with this rich heritage? Are the scientific principles and practical instructions handed down to us being applied in our

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* Read before the Section on Ophthalmology at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

refraction work? I do not think that I am violating the canons of modesty when I assert that in no other country is better refraction work done than in the United States. The correction of the minor forms of astigmatism, with all the benefits that it confers, is more common in this country than elsewhere. And if I mistake not, the original advocates of the use of the quarter diopter cylinder were Chisolm and Gould, both Americans. Foremost among the investigators of the anomalies of the ocular muscles stand Stevens and Howe, and the latter's work, "The Muscles of the Eye," is the most comprehensive and exhaustive treatise ever published on the subject.

In recent years we passed through a rather sharp epidemic of muscle cutting; but that has blown over, and today more conservative methods prevail. The nonsurgical treatment of convergent squint is becoming more common, and in consequence, cases of postoperative exotropia are less frequent. Opticians tell me that bizarre prescriptions are less common than they were ten or fifteen years ago. Such gross errors as a + 1 sph — 1 cyl ax 180, are rare, but the more confusing combination of a + 1 sph — 0, 75 cyl ax 180 are still seen sometimes. More men are realizing that in ametropia the disturbed relations between accommodation and convergence play an important rôle in the causation of asthenopia, and that the study of the relative range of accommodation and convergence is not a "laboratory stunt," as it was at one time wont to be called, but an important factor in the problems of refraction work. There is a wider recognition of the fact that many of the phorias are the direct result of disturbances between these two functions, caused by ametropia, and that the sane procedure is to remove the cause rather than treat the effect thereof.

Taking these facts into account and further considering the excellent work being done by some of our leading men, we might deem the present status of refraction work eminently satisfactory. But the only trouble is that there is too much bad work mingled with the good; for it must be acknowledged that there is a lot of careless refracting being done, and some of it in places from which better things should be expected.

Examining the causes of this evil, we find that ignorance is responsible for the largest quota; but after making allowance for bad work due to inadequate training, a considerable percentage remains to be accounted for. Let us for a moment look into the causes of this percentage.

Strange as it may seem, we have to class among the fruitful causes of bad work the very means that enable careful and judicious observers to obtain their best results, namely, measuring devices. Ophthalmic measuring instruments are apt to fascinate the inexperienced observer, tempting him to surrender his judgment to their mechanical accuracy and deem their findings conclusive. The power of this fascination is to be seen in the tendency noted in some quarters to reduce refraction work to a quasimechanical process. The late Dr. John Murphy, in contending against this tendency as it affected surgery, used to say to his assistants, "Gentlemen, please remember that a diagnosis is made with the cortical cells, not with instruments."

Now, I do not impugn the use of devices for measuring refraction and muscle balance; they are indispensable, for they furnish us with data obtainable in no other way. But these data, as they apply to a given case, must be interpreted and this work must be done with the "cortical cells," for at times it is a problem requiring careful study and nice discrimination.

When, in the laboratory, instruments are used to investigate the properties of matter, their findings may be considered conclusive; but when, in the office, devices are employed to ascertain the muscular balance and the refraction of eyes, their findings are not conclusive, for their significance is modified by the general condition, special characteristics and idiosyncrasies of the person to whom the eyes belong. Two patients might each have a card with identical data regarding their refraction, accommodation and muscular conditions, but it does not follow that the two patients should be treated alike. One of them might need, in addition to the correction of his ametropia, orthoptic exercises, reconstructive or sedative medication and complete rest, while the other might be immediately relieved of all his troubles by a pair of glasses. In the practice of ophthalmology, as in the practice of medicine, the study of the individual is paramount.

Another factor in the production of poor refraction work is the plan, adopted by some oculists, of delegating this part of the work to young assistants, and in some instances, even to office attendants barely initiated into the rudiments of the science. When we consider that, because of the preponderance of refraction anomalies over other forms of ocular disturbances, this work more abundantly contributes to public efficiency by enabling children to acquire an education and fitting them, when older, to earn their living, and by preventing certain incapacitating eye diseases resulting from continued eye strain; its importance is so obvious and the results depending on its proper performance are so momentous, that delegating it to inexperienced hands seems like a sin against the public weal. Unless an assistant is thoroughly trained and has wide experience in this work, it would seem much wiser for the head man to do the refracting and to delegate to an assistant the routine treatment of cases.

If it is answered that the assistant's findings are carefully supervised, the reply is, that adequate supervision is equivalent to doing the work over, with the consequent loss of time, and that inadequate supervision is simply placing the mark of approval on what may be, and in the circumstances probably is, bad work.

Regarding the practice of eliminating the use of cycloplegics and of correcting the manifest error, I would say only that in my estimation it lacks the main elements of true scientific work. It is true that it has received the *conditional* sanction of some of the great masters, but somehow the sanction does not seem to harmonize with the precepts elsewhere given in their books. I realize that circumstances arise when fitting glasses in this manner is the alternative to doing nothing; but the patient should be warned that it is simply a provisional expedient and that the full examination should be made at the earliest possible moment. The only things that can be said in its favor are that it pleases a certain class of people by catering to their prejudice against the use of "drops," and that it is a quick and easy way of disposing of the case. But it should ever be borne in mind that in neglecting to ascertain the total error of refraction, the work is transferred to the field of conjecture. If the patient is 40 or more years old, this field has become so limited that one can fearlessly venture to estimate its boundaries; but in children and persons under 25, the manifest error gives no certain indication of what may remain latent

In the moderate and high degrees of hypermetropia, the accommodation that masks the latent part of the error, taken in relation to the convergence necessary to maintain singular binocular vision, is responsible for most of the disturbances that bring the patient to the oculist. Correction of the manifest hypermetropia simply lessens the struggle of accommodation and convergence by the amount in meter angles corresponding to the dioptric power of the lenses prescribed. Why the normal relations between these two functions should not be at once restored, so far as they can be with glasses, is a question that the advocates of this method of refracting have never answered satisfactorily.

The tedious process of repeatedly changing glasses to correct the gradually increasing quota of manifest error seems to me both unnecessary and unduly hard on the patient's pocketbook. A young patient having a total hypermetropia of 4 or more diopters, with an absolute manifest of 1 diopter, usually has a long road to travel and many glasses to purchase before the ultimate goal is reached. The optometrists have not been slow in seizing the opportunity to instance the advocates of this method in pushing their claims for legislative recognition, alleging that the optometrists use the same method in fitting glasses.

The foregoing remarks may be classed under the head of personal opinions, and as such they are open to discussion. I do not entertain the hope that my comments will in the least affect the methods of those of my colleagues that happen to differ from me in opinion. My main object has been to point out to my younger colleagues some of the things that my experience has taught me to regard as pitfalls in the road to the accomplishment of good refraction work.

Let us now consider ignorance—or should I call it lack of adequate instruction—the source from which the largest percentage of bad work emanates.

It is well known that there are a large number of men practicing ophthalmology who neither by nature, education nor training are fitted for the work. If, with similar lack of fitness, some of these men were put to work in a factory where their jobs were inspected, their places would soon be vacant. But the blunders of medical men are not subject to inspection and have to be endured by the patient, until perchance he falls into the hands of a man who understands his business but who is deterred by ethical reasons from exposing the ignorance of his brother physician.

How prevalent is this lack of training was disclosed at the conclave of the American College of Surgeons held in Chicago in 1917, when the director reported that in the examinations held for fellowship in the college, the poorest papers were presented by the eye, ear, nose and throat men, and that only 2 per cent. were admitted to fellowship.

In days gone by, the excuse for ignorance was the lack of educational facilities. This allegation was true to a certain extent; but even when opportunity for instruction was offered, it either was not embraced or was embraced in such a perfunctory and indifferent manner that it was profitless. Especially was this true of the study of refraction.

My interest in teaching this branch of the specialty dates back many years. Under conditions more or less favorable, I have made five attempts to establish postgraduate courses in refraction. They were all failures because the men were not interested in this part of the work. My clinics and the operating room were always crowded, but on refraction days there was always room to spare. Indeed, and this is significant, the students seemed more interested in watching the assistants fit glasses than they were in learning the properties of the glasses and the nature of the anomaly that they were being fitted to correct. As one of them, who had been practicing ophthalmology for several years, put it: "You talk about a lot of things that I don't understand and that don't interest me. Those fellows out there are doing real practical work; and I am a practical man." I might add that a few days later in my clinic, this "practical man" diagnosed as plastic iritis, a typical case of acute glaucoma.

Within the last few years, things have changed for the better in the matter of opportunities for studying ophthalmology. There is now little excuse for ignorance, and it is to be hoped that in the near future ignorance on this subject will be inexcusable.

The University of Colorado School of Medicine has established a course in ophthalmology under the direction of Dr. Edward Jackson of Denver. The minimum term is one year, with the advice to extend it one year longer. On passing a satisfactory examination, a diploma of Doctor of Ophthalmology is conferred. The University of Minnesota Medical School also has a one-year course in ophthalmology and confers a degree of Doctor of Ophthalmology. Both these institutions offer a thorough course of instruction in physical and physiologic optics, refraction and accommodation, and muscle anomalies.

The American Board of Ophthalmic Examiners, acting in conjunction with the American College of Surgeons, is endeavoring to sift the good from the bad by holding examinations and issuing certificates to men who have proved their fitness to practice ophthalmology. As this board acts as the committee on credentials of the American College of Surgeons, its certificate entitles its possessor to fellowship in the college.

I am informed that the examining board is not overburdened with work. This was to be expected. A certain class of medical men have been drifting for years into ophthalmology, most of them through the door of six weeks' postgraduate courses. They have been practicing the specialty to their own satisfaction and profit, caring little whether or not their qualifications were brought into question. Is it reasonable that such men shall of their own free will submit to an examination which they feel themselves unable to pass? It would be absurd to expect such a thing. It is to our younger men that we must look for the realization of all hopes for higher standards. To enable these men to obtain adequate training in ophthalmology, it will be necessary that more of our medical colleges follow the noble example set by the University of Colorado and the University of Minnesota.

Further, as a protection to men who have taken the pains properly to fit themselves for the specialty, postgraduate schools and institutions devoted to the treatment of eye diseases should refuse to give certificates for a few weeks' attendance, should establish courses of at least four months in which all the branches of the specialty should be taught, and should require a satisfactory examination in all these branches before issuing a certificate. I fully realize that such an innovation would seriously affect some institutions, but if the standard is to be raised and men working to attain this standard are to be protected, it will be necessary to "hew to the line, let the chips fly where they may."

To encourage the establishing of schools of ophthalmology in our medical colleges, and to induce the managers of postgraduate schools and of eye institutions to adopt longer and more thorough courses of training would require the cooperation of the medical fraternity at large. This cooperation could be secured, I believe, by a concerted propaganda carried on by our national, sectional and local ophthalmologic societies.

Without the cooperation of the medical profession at large, little or nothing can be accomplished. So long as incompetent men that drift into ophthalmology by a cheap and easy short cut are put on a par with men who have traveled the hard and costly road, there will be little inducement for the latter to make the effort. But if medical men would lend their aid by giving preference to these worthy young fellows, not only would many more of them strive for the highest standards, but also, it would induce others, who hitherto have cared little about standards, to improve themselves and apply to the Board of Ophthalmic Examiners to prove their competence and their rights to the confidence of their professional brethren.

CORRECTION OF THE MUSCULAR ANOMALIES OF THE EYES

SECOND IN IMPORTANCE ONLY TO THE CORRECTION OF THEIR FAULTS OF REFRACTION *

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BALTIMORE

Unless my experience in dealing with asthenopia is very exceptional, and the deductions drawn therefrom entirely misleading, ophthalmic practitioners, as a rule, are inclined, it would seem, to minimize the importance of the muscular anomalies of the eyes, and to lay relatively too great stress on their refractive faults as etiologic factors in this condition.

This conviction, if I may call it such, is due, in considerable measure, to the fact that in asthenopic patients that come into my hands after having been given glasses by other ophthalmologists, it is so often found that, though great pains evidently have been taken to correct even minor faults of refraction, grave muscular errors have been entirely overlooked, or, if detected, have been ignored in the glasses prescribed.

Then, let one turn to the tables of "affections of the eyes treated" in the annual report of almost any ophthalmic hospital, and note the striking contrast between the large number of cases of anomalies of refraction and accommodation and the insignificant number of latent muscular faults there recorded. For example, in a recent report of a well-known hospital for diseases of the eye, ear, nose and throat, I find under the heading "Anomalies of Refraction and Accommodation" 2,819 cases tabulated, while I fail to find in the tables mention of a single case of latent muscular fault, a single instance of heterophoria. In another report of the same institution, I find four cases of exophoria recorded—no mention being made of other latent muscular faults—while 1,340 cases of anomalies of refraction and accommodation are included.

The report of another eye and ear hospital, one of the largest and best known in the United States, shows a similar, marked contrast—10,854 anomalies of refraction and accommodation are mentioned, and only twenty-three cases of latent muscular faults, five of esophoria, eighteen of exophoria and one of hyperphoria. Quite as remarkable is the fact that during the period covered by this report, in which only these twenty-three cases of heterophoria were observed, there were recorded no less than 537 cases of convergent and divergent strabismus. A later report of this same institution, made in 1917, gives 7,581 refractive anomalies, 541 convergent and divergent squints, and only three cases of heterophoria, while the report for the same year of a well-known hospital for diseases of the eye, ear and throat, in New York, records 2,849 refractive anomalies, 283 cases of strabismus, and only two cases of heterophoria.

The inevitable conclusion to be drawn from these figures, it seems to me, is that in these institutions, and not improbably in the majority of similar institutions throughout the country, the latent muscular faults of the eyes—and it is, of course, these *latent* faults, not the manifest faults, the squints, that give rise to asthenopia, headaches, etc.—are in large measure ignored in the routine examinations of the eyes of patients who apply for the relief of asthenopia.

The disposition on the part of so many ophthalmologists to underestimate the importance of the muscular faults of the eyes and to center their attention on the faults of refraction is, I believe, due chiefly to the fact that muscular imbalance is not infrequently largely, and sometimes wholly, dependent on errors of refraction, and is lessened or may be entirely done away with when these errors are corrected by suitable lenses. This circumstance, indeed, has led certain extremists to deny the existence of "muscular asthenopia," and to contend that this condition is, in all cases, due to a refractive fault, and is eliminated by the correction of this fault. And, it may be added, there are also extremists—very few, it is true—who hold exactly the opposite view, who insist that muscular imbalance is in nowise dependent on anomalies of refraction—manifestly a still more bizarre conception.

While the views of these extremists do not deserve serious consideration, it has seemed to me well worth while to utter a word of warning against what I believe to be the present trend of ophthalmic practitioners to belittle the importance of these latent anomalies of the ocular muscles.

The point that I wish to emphasize is, as I have said before,[1] that "although heterophoric conditions, because less common, are not so frequent a cause of asthenopia as are errors of refraction, they are quite as capable of producing the manifold symptoms, local and remote, which we have learned to attribute to eyestrain." And further, that "while it is true refractive errors, when present, markedly influence . . . muscular faults, there are muscular faults . . . which are in no sense dependent upon ametropia, and which start are evidently due to disturbance of the exterior muscles of the eye, and in that case treatment of the latter should be initiated at once.

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* Read before the Section on Ophthalmology at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

[1] Theobald, Samuel: Prevalent Diseases of the Eye, Philadelphia, W. B. Saunders Company, 1906, p. 466.

Dr. W. W. Kahn, Detroit: Formerly we sent our patients to the internist, and now the internist sends them to us. We have reason to congratulate ourselves on the energy and the proficiency obtained in our work. Dr. Emerson's paper gives the thought that the eyestrain symptoms are closely connected with the bodily health. In order to get our best results in refraction, it is absolutely necessary that we see that the other troubles in the patient are corrected. I try to cooperate with our general practitioners and specialists to get the patient into the best possible health, and in that way to get the best results through refraction. There are no anastigmatic eyes. Dr. Gould himself says he never saw an anastigmatic eye.

Dr. Sidney L. Olsho, Philadelphia: I have used a trial frame like Dr. Pyle's. In certain respects my trial frame differs slightly.

(Dr. Olsho gave a blackboard demonstration of his trial frame. A full description will be published in the transactions of the section.)

Dr. John Green, St. Louis: Since I have been systematically using Lancaster's charts I am convinced that I determine the axis and strength of the cylinder with greater accuracy than ever before. After all, it is the postcycloplegia test which determines the prescription, and it is precisely in determining the exact axis of the cylinder under these conditions that Lancaster's charts excel. It is a truism that the axis "under drops" and the axis "after drops" may differ. With Lancaster's charts it is possible with most patients to determine the axis within five degrees and the strength of the cylinder to from 1 to 8 diopters. I question very much whether the method of determining the precise axis by having the patient observe the gaps in small letters and indicate the "stop" point of a rotating cylinder can be equally exact.

Dr. William H. Wilder, Chicago: The older members of the section will recall the time when we asked the internists to recognize the fact that headaches may be produced by such a mythical thing as eyestrain. We must not forget the fact that ophthalmology is only a branch of medicine, and that the eye is not differentiated from the other organs. It behooves every ophthalmologist to remember that he is also a physician, and that he must take and study the case as a whole. Headache is a symptom with which we must reckon. These headaches take place in a class of individuals who have nerve fatigue. The individual's nervous balance is upset, and we must try to straighten it out and save him from a fall. When we have convalescence from a serious disease, we cannot give the patient tasks to perform which he might do when in normal health. And here I offer a word of suggestion to the internist, not to imagine that these patients can use their eye muscles as readily as they did in health.

Dr. C. J. Savage, Nashville: I will refer to some cases of muscular errors in which existed cyclophoria, a condition not mentioned in any paper or discussion so far this morning. A man who had, in spite of difficulties, grown to be a great banker, found himself confronted with an offer of a high position in a New York bank. He knew the physical condition of his eyes was such that he could not undertake the greater work. These were his errors, as I found them: Left hyperphoria 4 degrees plus cyclophoria 8 degrees, and exophoria 14 degrees. The complication of plus cyclophoria was the condition which made him carry his head toward his right shoulder, in which position he could see single with his two eyes. With head erect he had double vision, and the doubling was worse if he attempted to carry his head toward the left shoulder. I did a nasal marginal tenotomy of the left superior rectus, and a central tenotomy of the left external rectus. From that time to this he has been comfortable in the work of his new position. Another man had since childhood been wholly unable to maintain binocular single vision, the right eye being the one which would turn always directly out. The monocular phorometer showed him to have exotropia of 26 degrees and plus cyclotropia of 17 degrees. I made an upper marginal tenotomy of his right externus, and ten days later made a right marginal tenotomy of his left externus. Following the first operation there was binocular single vision, which was made easier by the second operation.

His cycloexotropia has been transformed into practical orthophoria. He has binocular single vision at all times, and is comfortable in his work. The cyclophorometer still shows probably 2 degrees of plus cyclophoria. A third man, an army surgeon, was wearing a plus one and one half prism base down for the right eye, and also a plus one and one half prism, with base up, before the left eye. With a monocular phorometer I found him without any hyperphoria, perfect balance of the vertically acting muscles. He had 6 degrees of exophoria in the near, and the cyclophorometer showed him to have 70 degrees of plus cyclophoria. I did an upper marginal tenotomy of both externi. Five hours after the operation, he had no cyclophoria at all. The Maddox rod is wholly useless in testing the recti muscles, but constitutes the very best test for imbalance of the obliques, that is, after cyclophoria.

Dr. H. B. Lemere, Omaha: Patients are sometimes exhausted and suffering from symptoms. That is why they come to you. You give them a test chart with the light coming through frosted glass, with black letters on this glass. You are going against all laws of illumination. How can this be remedied? The test chart should be illuminated by indirect lighting. I made such a chart with a draughtsman's board, two lights and two parabolic reflectors. The light in every meridian is the same. There is no shadow from any object erected in the middle of the chart. Many cases of refractive error change from day to day and from week to week, and these cases under most complete cycloplegia will change both in the axis of the correcting cylinder and in its amount. What is this change due to? It is not due to the ciliary muscle. In the large percentage of the cases I have found these cases show minute changes in the macular region, causing the variations in refraction. This condition will be overlooked unless the macular region is inspected very carefully. The ophthalmoscopic examination must be made after the subjective test; otherwise a scotoma from such an examination of the macula as I have found that about three seconds' observation of the region are necessary to observe the changes.

Dr. Linn Emerson, Orange, N. J.: This symposium on refraction would not be complete without registering a protest against the so-called library and Windsor style of frames. With the objection to spectacles, it is entirely artificial, as we all remember that 10 years ago we could not get young women to wear spectacles. They insisted on glasses because they were more stylish. Now, all the girls will go out and get a pair of these ugly library spectacles. Why? Because they are fashionable. The lenses are too large and widely separated, particularly if they are bifocal. And what is worse than all the rest is those lenses turn in the frame. If you must wear them, make the lenses slightly oval so they cannot turn, or that the lenses may be marked at the hinge, so that they can be seen to be out of proper axis when such is the case.

Dr. Oliver Tydings, Chicago: The whole question is one of diagnosis. The man most accurate in diagnosis finds fewer of those cases. A patient had intolerable headaches for three or four years, and they were absolutely relieved by removal of the tonsils. As to cycloplegias, I have used scopolamin almost exclusively in my practice. Where I cannot use scopolamin, I use atropin; but you can get as good results from scopolamin in three-quarters to one and one-half hours, as you can get from the use of atropin in 56 hours. I fully endorse what Dr. Savage said about the Maddox rod, and what Dr. Theobald said about the necessity of accurate muscular measurement.

Dr. Dunbar Roy, Atlanta, Ga.: I agree with Dr. Emerson's view in the main, but he has not gone far enough in suggesting a remedy. The reason why some ophthalmologists relieve their patients by the fitting of glasses is the fact that they study the individual in all his or her environments, not simply as an eye case. This efficiency is obtained by long experience. I agree with the essayist that it is the low degree of error which produces the neurotic symptoms. In advancing the plea for a more thorough use of atropin, I think he is wrong unless he qualifies it by having the examination made after the mydriatic effect has entirely subsided. Patients and doctors are not willing to wait. Homatropin is not a cycloplegic in the true sense of the word. If you want to examine an eye where the accommodation is paralyzed you must use atropin. If you only want a mydriatic you can use homatropin unless the pupil is too small for one to use retinoscopy or to get a clear image with the ophthalmoscope. When a cycloplegic is needed it is atropin. I rarely use either in patients over 20 years of age. When a patient needs glasses he needs them when his eyes are in their natural or normal condition and not when the muscle of accommodation is partially paralyzed. This is the reason why opticians so frequently fit patients with comfortable glasses where the ophthalmologist has failed. Another great trouble is the having of a fixed distance to which reading glasses are fitted. Some patients want a close focus in their work, others want a very long focus. This idea that the reading distance for every individual must be at 12, 13 or 14 inches is wrong. The workman who only reads the evening papers and uses his glasses for driving nails and putting names in his day book on the counter, does not need a glass like the student and architect, who must see every line and angle in his work. For distant glasses the patient needs glasses for infinite distance, not 20 feet. Twenty feet is not infinite. Let him go to the window and look out for two blocks away and see if the glasses suit him. Another feature which is wrong. The big trial frames are a nuisance. I am sorry to see Dr. Pyle refer to those cumbersome trial frames as pictured in his paper. They are a nuisance and should be abolished. The patient is more concerned with the heavy frames on the nose than he is about the acuity of vision. He does not know which is the discomfort, the glasses or the frames. Have a swing frame in front or a one groove aluminum. The essayist is right. Work with the internist but use more common sense in doing your refractive work.

DR. A. E. DAVIS, New York: I have been especially pleased and instructed by the paper of Dr. Emerson, who has emphasized the fact that the eyes are something more than two optical instruments set in the front of the head. The eyes are indeed a vital part of the complex organism of the entire body and in fitting and adjusting glasses we should bear this point in mind. His description of those cases of eyestrain associated with sick headaches, migraine, the phobias, etc., is highly illuminating and his insistence that in such cases the combined efforts of both the ophthalmologist and the internist are required, is sound teaching. In these exceptional cases I am in entire accord with the dictum that the entire static error should be ascertained by the full use of a true cycloplegic, as atropin or scopolamin and not the use of the so-called cycloplegic homatropin. In such cases all the objective tests should be made and then the crucial subjective tests, including muscle balance. The tests should not be prolonged too far at a single sitting, unless, as Dr. Emerson says, the patient becomes fatigued. In such instances the patient is uncertain what he does see, and I may say, the examiner is often uncertain of what he is trying to do. In the ordinary refraction patients above fifteen years of age, I do not use cycloplegics as a routine procedure, reserving cycloplegics for exceptional cases where there are indications of spasm of accommodation in children in squint cases, and in the class of cases spoken of by Dr. Emerson. In reference to the point made by Dr. Gardiner that no satisfactory answer had been forthcoming, why in high degrees of hypermetropia the normal relations between convergence and accommodation should not at once be restored so far as they can be with glasses (full correction), is a question that the advocates of a partial correction of the hypermetropia have never answered satisfactorily. I may say that Landoldt answered this question long ago when he showed that the ciliary muscle could work comfortably with only one third of its power in reserve, whereas the converging muscle must keep two thirds of its power in reserve. In all cases with rare exceptions I test the muscle balance. However, I give prisms only for the correction of vertical deviation.

DR. CHARLES P. EMERSON, Indianapolis: One of the chief duties of a teacher of internal medicine is to disabuse the minds of his students of the use of those terms which we call "semaphore" phrases. They stop a train of thought. Such words are migraine, neurasthenia and cycloplegia. To judge of the asthenia of the patient is my function, and while it might be desirable for the ophthalmologist to get some idea of whether his patient is thenic or asthenic, it took us two or three hours to do so, and you should ask us concerning the results of the nervous reactions of this patient, and then you should confer with us as to whether those particular symptoms should be corrected by eyeglasses, or whether we should proceed farther in seeking for the cause of eyestrain. Some of the cases have been those of asthenia, and you have told us they were cases of ciliary hyperatrophy. You told us these cases were the ones in which we required repeated attention in giving them what was desired.

DR. WALTER L. PYLE, Philadelphia: It is a great satisfaction to hear from a well known internist such an excellent exposition of the problems relative to eyestrain. Dr. Emerson's fear of the narrowness of the specialty of ophthalmology will soon be unwarranted. From my experience in private consultations and professional meetings, no specialist is finding closer or more numerous interrelations with the whole science of medicine and surgery than the oculist. In ophthalmic meetings no subject is more popular than medical ophthalmology, or neuro-ophthalmology; and some of the established methods of medical diagnosis have been elaborated chiefly by observations and experiments of ophthalmologists. Dr. Emerson's warning against "overkeenness of vision" is significant of too frequent overcorrection of myopia or undercorrection of hyperopia, circumstances which should never occur if preliminary cycloplegia is used, and proper methods of examination of refraction employed. Dr. Emerson issues a very proper plea for personal work in the examination of refraction. I always do my refractive work personally. In regard to the invariable use of atropin, I do not believe that this is wise. Prolonged cycloplegia and mydriasis often greatly interfere with the best subjectice examinations. A more transient cycloplegic such as homatropin, used in the manner I have stated, generally gives better results, and more often makes evident the complete optical defect sooner than the old fashioned prolonged use of atropin. I agree with Dr. Emerson that each patient should be studied individually, and that the proper prescription for lenses should be determined only after a consideration of all the associated physical, physiologic and psychologic elements. I am in general agreement with Dr. Gardiner's statements. With few exceptions, I am in accordance with Dr. Theobald. In every case, I measure and record the heterophoria. These records are always preserved with those of the optical examinations. The report of the Committee on Ocular Muscles gives striking evidence of the thorough and deliberate way in which they are studying the pertinent questions of this unsettled subject.

DR. EDWIN J. GARDINER, Chicago: I want to insist on the use of a cycloplegic for thorough paralysis. A case is not refracted unless accommodation is paralyzed. Unless you have the accommodation paralyzed you cannot get the combinations of the ciliary nerve with the external muscles of the eye. The physician should have the full condition reported, and he cannot report the full condition without that information.

DR. SAMUEL THEOBALD, Baltimore: A number of those who have read the papers and spoken on the subject have mentioned that they used the Maddox rod—I suppose we all mean the multiple Maddox rod—in testing the lateral muscular balance. I want to protest that the multiple Maddox rod is the ideal test for vertical hyperphoria. I believe it is absolutely misleading and untrustworthy when used for testing the efficiency of the lateral muscle.

PROCEEDINGS OF THE ATLANTIC CITY SESSION

MINUTES OF THE SEVENTIETH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, JUNE 9-13, 1919

(*Continued from page 1769*)

HOUSE OF DELEGATES

Third Meeting—Tuesday Morning, June 10

The House of Delegates met at 9:30 a. m. and was called to order by the Speaker.

The Secretary read the minutes of the previous meeting.

Dr. M. L. Harris, Illinois, moved that the minutes be approved as read.

Seconded and carried.

Supplementary Report from Committee on Credentials

Dr. C. P. Meriwether, Arkansas, Chairman, presented a supplementary report from the Committee on Credentials, stating that 119 delegates had registered, all of whom were entitled to be and were seated in the House.

It was moved and seconded that the report be approved. Carried.

Report of Committee on Sections and Section Work

Dr. George D. Head, Minnesota, Chairman, presented the report of the Reference Committee on Sections and Section Work, as follows:

Your Committee on Sections and Section Work, to which was referred the report of the Council on Scientific Assembly, submits its report as follows:

First, the action of the Council on Scientific Assembly, separating the division of section work into two groups, one group to meet in the morning hours and the other group to meet in the afternoon hours, is approved. This committee recommends to the House of Delegates that the Council on Scientific Assembly be authorized to continue a further trial of this plan at the next annual meeting of the Association.

Second, your committee approves of the recommendation of the Council on Scientific Assembly, limiting the number of papers including addresses on the program of any one section to twenty-five, and recommends to the House of Delegates the rereferring of the amendments suggested by the Council in order to make this change effective to the Committee on Amendments to the Constitution and By-Laws for proper action and report.

George Douglas Head, Chairman,
S. R. Roberts,
J. B. Blake,
L. S. McMurtry,
John Ridlon.

This report was considered in two separate sections as presented, and on two separate motions, which were duly seconded and carried, the report was adopted, and Part 2 was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Report of Reference Committee on Medical Education

Dr. J. H. J. Upham, Ohio, Chairman, read the report of the Reference Committee on Medical Education, as follows:

Your committee, having carefully considered the reports of the Council on Medical Education, is especially impressed by the continuous progress made under the auspices of the American Medical Association and its efficient Council. The chief factors contributing to this result, it appears to your committee, are the surveys made by the Council, the publicity given to the results of the surveys, and the annual conferences held with representatives of the medical schools, state medical examiners and other agencies interested in medical education.

Your committee would recommend that the council be instructed to urge state boards of medical examiners to utilize to a greater extent the information gathered each year by the Association with reference to the student body. It would seem that an arrangement might be effected which would avoid the multiplicity of reports now enacted from the medical schools.

The attention of the members of the House of Delegates should be especially called to the facts set forth in Table 5, included in this council's report. This table shows that in some of the states the public is not safeguarded from poorly trained doctors. Attention is called particularly to the footnotes where appear the figures for Arkansas, California, Colorado, Missouri and Texas, in which large numbers of graduates of Class C medical colleges have been licensed either by examination or by reciprocity. It is evident from the facts set forth in this table that we are still far from an ideal situation in regard to medical education and licensure in the United States.

The committee endorses the program of the Council with reference to (*a*) medical education and licensure; (*b*) preliminary medical education; (*c*) reinspection of the medical colleges; (*d*) hospital survey, and (*e*) the study of facilities for postgraduate education. In connection with the latter, it is the opinion of your committee that many more hospitals can, with advantage, and will, become teaching institutions.

Finally, the committee recommends the adoption of the report as a whole and urges that the Association lend every encouragement to the Council in the furtherance of its work.

Respectfully submitted,

J. H. J. Upham, Chairman,
J. R. Phelps,
Franklin E. Murphy,
George David Stewart.

After reading the report, Dr. Upham moved its adoption. Seconded and carried.

Report of Reference Committee on Legislation and Political Action

Dr. Thomas S. Cullen, Maryland, Chairman, presented the report of the Reference Committee on Legislation and Political Action as follows:

Your committee listened with the greatest interest to the "Report of the Social Insurance Committee," as given by our incoming president, Dr. Alexander Lambert. The House has not the slightest conception of the amount of work this committee has accomplished. To have read the report in full would have taken at least an hour and a half. We would respectfully recommend that every member of the Association read this report in full.

Dr. Lambert has already told the House of Delegates that the subject under consideration is a stupendous one, and that it must be considered from every angle. Our committee recommends that the report of the Social Insurance Committee be adopted in toto and that the thanks of the House be extended to Dr. Lambert and his committee for the tremendous work they have already done and are doing to solve this problem, which vitally interests every man, woman and child in the United States.

Our committee heartily commends Dr. Lambert's committee in their refraining to make any definite recommendations on the subject at this time.

Your committee would suggest a change in the By-Laws whereby the title of this Reference Committee on Legislation and Political Action be changed to Reference Committee on Legislation and Public Relations.

This change is deemed advisable at this time, as the term political action has in some quarters been thought to refer to politics. In the words of Confucius, "Avoid the very appearance of evil. Do not stoop to tie your shoes in your neighbor's melon patch."

Thomas S. Cullen, Chairman,
Clarence Pierson,
Charles E. Humiston,

Dr. Cullen moved the adoption of the first part of the report. Seconded and carried.

The second paragraph of the report was read when Dr. E. Eliot Harris, New York, moved to amend by inserting the words "A special narcotic drug committee in conjunction with the Council on Health and Public Instruction shall be directed to study the entire narcotic drug situation."

The amendment was seconded and accepted.

It was moved that this part of the report as amended be adopted.

Seconded and carried.

Dr. Cullen read the third part of the report, and moved its adoption, and that the part referring to a change in the By-Laws be referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Seconded and carried.

Report of Reference Committee on Amendments to Constitution and By-Laws

Dr. Floyd M. Crandall, New York, Chairman, read the report of the Reference Committee on Amendments to the Constitution and By-Laws, as follows:

Your committee respectfully reports as follows:

The Judicial Council in their report to the House of Delegates presented numerous amendments to the Constitution.

Your committee recommends that the amendments be laid over until the next annual meeting of the House of Delegates, as required by the By-Laws, and also recommends that the members of the House of Delegates be requested to study the changes proposed and send suggestions to the Secretary of the Judicial Council, to the end that after a year of deliberation, comprehensive and wise action may be taken in the changes proposed.

The Council on Scientific Assembly recommended that Section 12, Chapter XI, of the By-Laws be amended by striking out the word "thirty" and substituting the word "twenty-five."

The section will then read: The number of papers including addresses, on the program of any section shall not exceed twenty-five.

The committee recommends the adoption of this amendment.

The same Council also proposed an amendment to Section 1, Chapter XI, Item 13, of the By-Laws, by deleting the words: "13, Genito-Urinary Diseases" and substituting therefore the words "13, Urology."

The committee recommends the adoption of this amendment.

The Secretary in his report recommended amendment to the By-Laws, Section 5, Chapter IV, which reads: "Not more than three Honorary Fellows shall be elected in any one year" so that the section shall read "Not more than three Honorary Fellows shall be elected at any annual session; provided, however, that on recommendation of the Council on Scientific Assembly and by unanimous vote, the House may elect more than three Honorary Fellows."

The committee recommends the adoption of this amendment.

Dr. E. Eliot Harris of New York presented the following amendment.

To amend Chapter IV, Section 2, of the By-Laws by adding at the end of the section, "provided, however, when there is only one nominee for the office, a majority vote without ballot shall elect."

FLOYD M. CRANDALL, Chairman,
P. W. TOMLINSON,
JOSEPH M. AIKIN,
I. C. CHASE,
FRANCIS A. WINTER.

The report was considered section by section, and on several motions, which were duly seconded and carried, each section was adopted after which the report, as a whole, was adopted.

Dr. Floyd M. Crandall, New York, moved that the Secretary be empowered to arrange the amendments adopted so as to bring them into proper relation with one another and to make the Constitution and By-Laws consistent and to renumber any sections that may be necessary and prepare them for printing.

Seconded and carried.

Report of Reference Committee on Reports of Officers

Dr. Hugh T. Patrick, Illinois, Chairman, read the report of the Reference Committee on Reports of Officers, as follows:

To the House of Delegates:

Your Reference Committee on Reports of Officers begs to continue its report as follows:

First, with reference to the address of the Chairman of the House of Delegates, your committee recommends:

1. That the Council on Health and Public Instruction be instructed to make an earnest effort actively to cooperate with the National Educational Association in the matter of physical education and physical development of the children and youth of the Nation.

2. That the House of Delegates endorse the plan of an annual midwinter conference of the secretaries of the various sections of the Scientific Assembly.

3. That the House of Delegates endorse the plan of an annual midwinter conference of the secretaries of all the state societies with the officers of the American Medical Association, and that the Trustees and Secretary of the American Medical Association be requested to secure, if possible, the active cooperation of the state societies in this movement.

4. That the House of Delegates consider the wisdom of designating a time when it shall sit as a committee of the whole for the consideration of any subjects the delegates may wish to present, which subjects could not be presented in the regular routine procedures of the House.

This suggestion is made by your committee because in the past delegates have complained that they were unable to get before the House matters in which they were interested.

Second, with reference to the address of the President, your committee:

1. Would express the opinion that his first suggestion is covered by your committee's recommendation of a mid-winter conference of state secretaries; and his sound advice on hospital standardization has been covered by the decision of the House to create a Council or Bureau on Hospitals.

2. Earnestly recommends that the Council on Medical Education be instructed actively to interest itself in the subject of postgraduate medical education and to report at the next annual session the results of its investigations and such recommendations as it has been able to mature.

3. Recommends that the House make a formal endorsement of the work of the Council on Pharmacy and Chemistry and that the House endorse the suggestion of the President and that this Council make an effort to confer with and secure the cooperation of the reputable drug and pharmaceutical interests of the country.

4. Recommends that the Trustees be requested further to consider the feasibility of publishing a journal of surgery, and also a journal of health and medicine for lay readers, and that the House express itself as sympathetic to both ventures if the Trustees find them to be practicable.

5. Recommends that the House endorse the suggestion that each of the councils of the Association make an effort to get in touch with and coordinate their work with similar bodies or committees in the different states, with a view to mutual assistance and advantage.

Third, your committee recommends:

1. Commendation by the House of that portion of the report of the Judicial Council relating to old age and disability insurance for physicians.

2. That the Judicial Council be requested to continue its investigations of this subject and to present a plan for such insurance when it believes that a practicable one can be formulated.

Fourth, your committee recommends that the resolution presented by the House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland relating to abbreviation of premedical education be referred to the Council on Medical Education.

Respectfully submitted,

HUGH T. PATRICK, Chairman,
ROCK SLEYSTER,
J. N. HALL,
EDGAR A. HINES,
J. E. LANE.

At this juncture, the Vice Speaker took the Chair.

The report was considered section by section. The three sections of the first division were read, and on three separate motions, which were duly seconded, were adopted.

Section 4 of the first division was read, and Dr. Patrick moved its adoption, which motion was seconded by Dr. C. E. Cantrell, Texas.

After discussion by Dr. Frederic E. Sondern, New York, Dr. John D. McLean, Pennsylvania; Dr. C. E. Cantrell, Texas, and Dr. E. Eliot Harris, New York, the motion to adopt this section was put and declared lost.

Sections 1, 2, 3, 4 and 5 of the second division of the report were read, and on five separate motions, which were duly seconded, were adopted.

Sections 1 and 2 of the third division were read, and on two separate motions, which were duly seconded, were adopted.

The fourth division of the report was read, and Dr. Patrick moved its adoption.

Seconded and carried.

Dr. C. E. Cantrell, Texas, then moved that the report of the committee as amended be adopted as a whole.

Seconded and carried.

Report of Reference Committee on Miscellaneous Business

Dr. Southgate Leigh, Virginia, presented the report of the Reference Committee on Miscellaneous Business and moved its adoption, which motion was duly seconded and carried.

The report is as follows:

The Reference Committee on Miscellaneous Business submit the following report: We are in hearty accord with the resolution introduced by Dr. H. M. Brown of Wisconsin, the purpose of which is the saving to the medical profession of the valuable works on medicine and surgery compiled by the Surgeon-General's Department, for the use of Army and Navy Surgeons, during the war, and which under existing conditions are likely to be destroyed. We therefore recommend that the Board of Trustees take such steps as are necessary to accomplish, if possible, this purpose.

Southgate Leigh, Acting Chairman,
H. B. Gibby, Secretary.

Dr. Hugh T. Patrick, Illinois, Chairman, stated that the Reference Committee on Reports of Officers had made no report on the Board of Trustees, which was referred to the committee. He moved that the report of the Board of Trustees be adopted and filed.

Seconded and carried.

Dr. A. N. Sinclair, Hawaii, moved that where the word "state" occurs in speaking of constituent associations, the words "state and territorial" be substituted. Motion seconded and referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Dr. J. H. J. Upham, Ohio, presented the following resolution which was referred to the Reference Committee on Legislation and Political Action:

Whereas, There has been introduced in the Senate of the United States and referred to the Committee on the Judiciary, a Bill, S. 1258, "To prohibit experiments upon living dogs in the District of Columbia or in any of the Territorial or Insular Possessions of the United States, and providing a penalty for violation thereof," and,

Whereas, The passage of such a bill would seriously embarrass the scientific researches of the government in disease prevention and therapy, because of the fact that the dog is an essential laboratory animal in the prosecution of such researches, therefore be it

Resolved, That the American Medical Association vigorously protest against the passage of such legislation, which would be inimical to the proper conduct of essential and life saving researches of disease, and that a copy of this resolution be sent to the chairman of the Judiciary Committee of the Senate.

Dr. Frederic E. Sondern, New York, offered a resolution protesting against the repeal of the daylight saving act, which was referred to the Reference Committee on Hygiene and Public Health.

Dr. R. G. Stroud, Arizona, offered the following resolution, which was adopted unanimously by a rising vote:

To the members of the House of Delegates:

Whereas, The medical profession responded to the cause of the great war during the past two years and

Whereas, Many of our members who so responded have given their lives in this cause, be it

Resolved, That in the minutes of this body the following memorium be adopted:

IN MEMORIAM

To the soldiers of peace who have given their lives so nobly in the service of the great war. May their death be an everlasting memorial that the medical profession may strive to copy the wonderful spirit which called these men to the service of their country in time of need.

Dr. J. E. Lane, Connecticut, moved that if any business shall come from the sections between now and Thursday, the Secretary is empowered to refer the same to the proper Reference Committees for consideration and report to the House of Delegates on Thursday afternoon.

Seconded and carried.

Dr. C. Van Zwalenburg, California, presented the following resolution, which was referred to the Reference Committee on Medical Education:

Whereas, The practice of medicine involves such an enormous range of scientific study that many minds must of necessity cover different fields of it, and

Whereas, We recognize the difficulties involved in the time and expense needed to secure a degree to practice medicine under the present curriculum, and

Whereas, There is a popular demand for less highly trained physicians as evidenced by the multiplicity of faddists and quacks preying on the public, and

Whereas, Nine-tenths of the ailments for which a physician is called do not require the attention of an expert, now therefore be it

Resolved, 1. That the House of Delegates of the American Medical Association encourage the designation of the practice of general medicine or "family physician" as a distinct and dignified specialty.

2. That we ask the Council on Medical Education to consider the possibility of establishing a distinct curriculum leading to the degree for the practice of this specialty which shall materially shorten the course.

3. That we emphasize the need of specialization, consultation and reference of patients.

Dr. William C. Fisher, New York, Delegate from the Section on Stomatology, asked for a decision by the Chair as to whether the adoption of the resolution referring to the election of officers of the various sections took effect this year.

The Vice Speaker ruled that the amendment to the By-Laws which changed the time for the election of section officers takes effect this year.

On motion, the House of Delegates adjourned until Thursday afternoon, June 12.

Fourth Meeting—Thursday Afternoon, June 12

The House of Delegates met at 2 p. m. and was called to order by the Speaker.

Supplementary Report of Committee on Credentials

Dr. C. P. Meriwether, Arkansas, Chairman, presented a supplementary report of the Committee on Credentials, stating that there were two regularly elected delegates from the state of Pennsylvania, who were not present; that Dr. W. D. Martin as an accredited and duly elected alternate was present, and the Committee on Credentials moved that he be seated as a delegate from Pennsylvania. From New Mexico, both the delegate and alternate were not present; that Dr. D. D. Swearingin had credentials from Dr. Miller, the accredited delegate. The committee was unable to make a report regarding this matter and desired to leave it to the House of Delegates.

It was moved and seconded that Dr. Martin, from Pennsylvania, and Dr. Swearingin from New Mexico be seated as delegates.

Seconded and carried.

Dr. F. S. Simpson, the duly accredited delegate from the Section on Obstetrics, Gynecology and Abdominal Surgery, being absent, Dr. Reuben Peterson, Michigan, was selected by the section to take the place of Dr. Simpson. The Committee on Credentials recommended that Dr. Peterson be seated in the place of Dr. Simpson.

It was moved and seconded that the recommendation of the Committee on Credentials be concurred in.

Seconded and carried.

It was moved that the report of the Committee on Credentials be adopted.

Seconded and carried.

The Secretary called the roll, and 114 delegates responded.

At the conclusion of the roll call, Dr. C. P. Meriwether, Arkansas, Chairman, presented a supplementary report for the committee on Credentials, stating that there were three duly accredited delegates from Illinois, who were not present, and recommended that Dr. William Allen Pusey be seated as delegate.

Dr. Randolph Winslow, Maryland, moved that Dr. Pusey be seated. Seconded.

Dr. Arthur T. McCormack, Kentucky, made the point of order that the Constitution and By-Laws of the American Medical Association provided for a method by which delegates and alternates should be accredited; that there was no provision for such an appointment as this, and that therefore the motion of Dr. Winslow was out of order.

The Speaker sustained the point of order raised by Dr. McCormack.

The Secretary read the minutes of the previous meeting, which were approved.

Election of Officers

The next order of business being the election of officers, Dr. Floyd M. Crandall, New York, nominated Dr. Hubert Work, Pueblo, Colo, for President of the Association.

The Speaker: A nomination needs no second. The question of whether the Speaker of the House of Delegates is a member of the House or not has never been determined. That carries with it the question if whether or not the Speaker of the House is eligible to election for President of this Association. The question is a vital one and is likely to come up, after a president is selected, along down through the list of officers as to whether or not the Speaker of the House is qualified to cast a vote in case of a tie. That is a question I will not rule on. If it pertains to me personally, I would do it with my usual promptness, and all of you can understand what that ruling would be. This question should be determined. I will therefore ask the Vice Speaker to take the chair and request him to lay the question before the House of Delegates in its entirety and ask the members of the House to settle for all time the status of the Speaker of the House of Delegates, so far as his eligibility for office is concerned and his qualifications to decide tie votes and other incidental matters.

The Vice Speaker took the chair.

Dr. E. Eliot Harris, New York, spoke on the question of the eligibility of the Speaker of the House as a candidate for President of the Association, stating that he had read the Constitution and By-Laws very carefully, in addition to Roberts' Rule of Order, which, according to the By-Laws, governs the deliberations of this body, and he was unable to find that the Speaker of the House was a member of the House, and there was nothing either in the Constitution or By-Laws which prohibited the Speaker from being placed in nomination for President.

Dr. Floyd M. Crandall, New York, said he also had read very carefully the Constitution and By-Laws and there was nothing which prevented the Speaker of the House from being voted on for the presidency of the American Medical Association. Accordingly, Dr. Crandall moved that the Speaker of the House of Delegates be declared eligible to the office of president or to any other of the great offices.

Motion seconded by Dr. C. E. Cantrell, Texas.

The Vice Speaker: How shall this question be determined?

Dr. E. Eliot Harris, New York, moved that the question be determined by a rising vote.

Seconded and carried.

The Vice Speaker: The House of Delegates will now vote on the eligibility of the Speaker of this House to the office of president or for any other office.

A rising vote was then taken, with the result that sixty-nine delegates favored the eligibility of the speaker to the office of president or for any other office, and twenty were opposed.

The motion was declared carried.

Commandant Joseph R. Phelps, U. S. Navy, nominated Admiral William C. Braisted, of the U. S. Navy, for President of the Association.

The nomination was seconded by Dr. Randolph Winslow, Maryland; Dr. R. M. Funkhauser, Missouri; Dr. J. G. Brook, Michigan; Dr. John D. McLean, Pennsylvania, and Gen. F. A. Winter, of the U. S. Army.

Dr. Hubert Work: Mr. Vice Speaker: All my friends knew all along that I was not even a tentative candidate for President of the Association at this time. I felt it was very important that this question I raised in the beginning should be settled, not because of this alone, but for the reasons I gave. I have not been at any time a tentative candidate for the presidency of this Association, and I am not now. Will you pardon me if I take the privilege of withdrawing my name as a candidate for President of this Association and second the nomination of Admiral Braisted. (Loud applause.)

Dr. E. Eliot Harris, New York, moved that nominations be closed.

Seconded and carried.

Dr. E. Eliot Harris, New York, moved that the House of Delegates cast its vote by rising.

Seconded and carried.

The House did so, and Admiral Braisted was declared unanimously elected President of the Association.

The other officers elected are as follows:

First Vice President—Dr. David L. Edsall, Boston.

Second Vice President—Dr. Emery Marvel, Atlantic City, N. J.

Third Vice President—Dr. Eugene S. Talbot, Chicago.

Fourth Vice President—Dr. George H. Kress, Los Angeles.

Secretary—Dr. Alexander R. Craig, Chicago.

Treasurer—Dr. William Allen Pusey, Chicago.

Speaker of the House of Delegates—Dr. Hubert Work, Pueblo, Colo.

Vice Speaker of the House of Delegates—Dr. Dwight H. Murray, Syracuse, N. Y.

Trustees—Dr. A. R. Mitchell, Lincoln, Neb.; Dr. Oscar Dowling, Shreveport, La.; Dr. D. Chester Brown, Danbury, Conn.

President Lambert nominated the following as members of standing committees, and the House of Delegates confirmed the nominations:

Judicial Council—Dr. M. L. Harris, Chicago, and Dr. I. C. Chase, Fort Worth, Texas, to fill the unexpired term.

Council on Health and Public Instruction—Dr. Haven Emerson, New York, and Dr. Victor C. Vaughan, Ann Arbor, Mich., to fill the unexpired term.

Council on Medical Education—Dr. Isadore Dyer, New Orleans, and Dr. Arthur Dean Bevan, Chicago, to fulfil the unexpired term.

Scientific Assembly—Dr. J. D. Blake, Boston.

Supplementary Report of Council on Scientific Assembly

The Secretary presented a supplementary report from the Council on Scientific Assembly to which was attached the following list of delegates representing the medical professions of foreign countries and foreign guests:

The Council on Scientific Assembly recommends that this year at this Victory Meeting the House of Delegates shall elect to Honorary Fellowship those physicians who are in attendance at this annual session as delegates representing the medical profession of the several countries which were the allies of the United States in the prosecution of the world's war and also those other guests of the association from other foreign nations. The Council reports that several of the sections have nominated the foreign delegates and guests whose name appear on the appended list.

J. Shelton Horsley,
George H. Simmons,
Alexander R. Craig.

Gen. L. Melis, Delegate	Belgium
Col. Antoine Depage, Delegate	Belgium
Lieut.-Col. P. Nolf, Delegate	Belgium
Prof. Jules Duesberg, Delegate	Belgium

Capt. Vande Velde, Guest	Belgium
Dr. René Sand, Delegate	Belgium
Sir Arthur Newsholme, Guest	England
Major Ernest W. Hey Groves, Delegate	England
Sir St. Clair Thomson, Delegate	England
Lieut.-Col. Sir Shirley Murphy, Delegate	England
Sir Arbuthnot Lane, Delegate	England
Rear-Admiral Edgar R. Dimsey, Delegate	England
Dr. Frank Atcherley Rose, Delegate	England
Dr. Arthur F. Hurst, Delegate	England
Major Fernand LeMaitre, Delegate	France
Major Paul Bégouin, Delegate	France
Major Robert Picqué, Delegate	France
Major S. T. Lee, Delegate	China
Commander Chang Ting-han, Delegate	China
Dr. Asajiro Kamimura, Delegate	Japan
Dr. Senichi Uchino, Delegate	Japan
Dr. Ryuyo Kodama, Guest	Japan
Dr. Juan Guiteras, Delegate	Cuba
Dr. Emilio Martinez, Delegate	Cuba
Dr. Julio Carrera, Delegate	Cuba
Dr. Francisco Fernandez, Guest	Cuba
Dr. Peter F. Holst, Guest	Norway
Dr. Sven Ingvar, Guest	Sweden

Greece was represented by the following Fellows of the Association: Dr. John Constas and Dr. Alexander Alexion.

On motion, duly seconded and carried, the report was adopted.

Supplementary Report of the Judicial Council

Dr. M. L. Harris, Illinois, Chairman of the Judicial Council, submitted the following supplementary report from the Judicial Council:

There has been submitted to the Judicial Council the application for Associate Fellowship of the following physicians who are residents of Canada and who are each of them members of the chartered national medical societies of Canada and their respective provinces: Joseph Boulanger, Edmonton, Canada; L. Seale Holmes, London, Ontario, Canada, and W. O. Taylor, Cobalt, Ontario, Canada.

Each of these applications is approved by the Judicial Council.

M. L. Harris, Chairman,
H. A. Black,
Randolph Winslow,
William S. Thayer.

On motion, duly seconded and carried, the report was accepted.

Applications for Associate Fellowship

The Secretary then submitted applications for Associate Fellowship approved by the officers of the several sections.

On motion, duly seconded and carried, those nominated for Honorary Fellowship were elected, and the Secretary was instructed to officially inform all those recommended for Associate Fellowship who are not eligible for membership in the state or territorial association within whose jurisdiction they reside, and against whom no objection is filed by the officers of the constituent association having jurisdiction, that they are Associate Fellows of this Association.

Supplementary Report of Reference Committee on Legislation and Political Action

Dr. Thomas S. Cullen, Maryland, Chairman, presented the following supplementary report of the Reference Committee on Legislation and Political Action:

In regard to House Bill 5123 and Senate Bill 1189 to prevent transmission through the mails of advertisements relating to the treatment of venereal diseases and certain sexual disorders, your committee heartily recommends that the resolution asking that these bills be passed be acted on favorably by the House of Delegates.

Your committee recommends that the resolution of Dr. E. Eliot Harris, which is as follows:

> *Resolved,* That the Council on Health and Public Instruction, in cooperation with the special committee on narcotic drugs constituted at this annual session of this House, be directed to study the entire narcotic drug situation, economic and medical, in the United States and report to the House of Delegates at the next meeting,

be adopted by this House.

In relation to the resolution offered by Dr. J. H. J. Upham, Ohio, on Senate Bill 1258 concerning animal experimentation, your committee recommends the adoption of this resolution by the House of Delegates, and that the matter be referred to the Council on Health and Public Instruction for appropriate action.

Your Committee received the following preambles and resolutions from the Section on Pharmacology and Therapeutics. Your Committee recommends that these also be referred to the Council on Health and Public Instructions:

PREAMBLES AND RESOLUTIONS PASSED BY THE SECTION ON PHARMACOLOGY AND THERAPEUTICS

> Whereas, The medical procedures of the recent war which are in most cases the direct result of experimentation on animals have led to the saving of hundreds of thousands of our soldiers from sickness and death, and
>
> Whereas, Further progress along these lines is menaced by a bill now before Congress known as No. S. 1258 prohibiting the use of dogs for experimental purposes, be it
>
> *Resolved,* That it is the sense of the Section of Pharmacology and Therapeutics of the American Medical Association that this proposed legislation is unwise, that it is a detriment to the progress of medicine and surgery, and that it imperils the health and lives of the citizens of the United States; and be it further
>
> *Resolved,* That the Section on Pharmacology and Therapeutics of this association urges on the Congress that this bill should not become a law.

Your committee has carefully considered the resolution adopted by the House of Delegates of the Medical Society of the State of New York which resolution is as follows:

> *Resolved,* That the delegates of the Medical Society of the State of New York to the American Medical Association be and are hereby instructed to introduce a resolution in the House of Delegates of the American Medical Association opposing the scheme of compulsory health insurance and to support it in every way possible.

At the meeting of the House of Delegates of the American Medical Association held on Tuesday last, your committee commented on the splendid work the Committee on Social Insurance had done and recommended that they be thanked for the tremendous amount of work they had already accomplished and further recommended that they be commended for having made no special recommendations at this time. We further advised that the report of the committee be adopted in toto. This the House of Delegates adopted unanimously.

To comply with the resolution from the state of New York would be an attempt to settle the subject when the evidence for and against is far from complete. Any further action of this body at this time would be a reversal of the action unanimously taken on Tuesday. We recommend that this resolution be tabled.

Clarence Pierson,
C. W. Stahl,
Charles E. Humiston,
Thomas S. Cullen, Chairman.

The report was considered section by section, and on several motions, duly seconded and carried, the report was adopted.

Dr. J. W. Schereschewsky, District of Columbia, moved that the report be adopted as a whole.

Seconded and carried.

Supplementary Report of Reference Committee on Sections and Section Work

Dr. George D. Head, Minnesota, Chairman, presented a supplementary report of the Reference Committee on Sections and Section Work.

The report follows:

> No Fellow shall contribute or read before his section or any section of this Association more than one paper in two successive years, except by special invitation adopted by a formal vote of the section.

Submitted for the Reference Committee.

George D. Head, Chairman.

Continuing, the chairman of this reference committee stated that in accordance with the understanding of the reference committee the recommendation submitted involved a change in the By-Laws or in the standing rules, and consequently it should lie over until the 1920 annual session. He therefore moved that the report be received in order that it shall be submitted to the House of Delegates at the next annual session for action.

Dr. Arthur T. McCormack, Kentucky, arose to a question of parliamentary inquiry and asked the Speaker to rule on whether or not this recommendation of the Reference Committee might not be adopted at this meeting as a standing rule of the association.

The Speaker ruled that the suggested procedure would be in order.

Thereupon Dr. McCormack moved to amend the recommendation of the reference committee by substituting the following:

> *Resolved,* That the House of Delegates shall establish a standing rule to the effect that no Fellow shall contribute or read before his section or any section of this association more than one paper in two successive years except by special invitation adopted by a formal vote of the section.

Dr. Head, Chairman of the Reference Committee, and mover of the motion, together with the seconder, accepted Dr. McCormack's amendment.

After discussion by Dr. Hugh T. Patrick, Illinois; Dr. M. L. Harris, Illinois, and Dr. J. B. Blake, Massachusetts, Dr. Harris moved that the resolution be laid on the table.

Seconded and carried.

Report of Reference Committee on Rules and Order of Business

Dr. Joseph Rilus Eastman, Indiana, Chairman of the Reference Committee on Rules and Order of Business, presented the following report:

The Reference Committee on Rules and Order of Business recommends for adoption the resolution offered by Dr. M. L. Harris of Illinois, as follows:

> *Resolved,* That the Secretary be instructed to have published in the handbook as an addendum all resolutions that express an opinion or policy of the Association that have been adopted by the House of Delegates during the past five years, and that this addendum be added to from year to year as new resolutions are adopted so that the members of the House may know what opinion and policies have been approved by this body, with the suggestion that the period embraced in the review be lengthened from five to ten years.

J. RILUS EASTMAN, Chairman,
G. WYTHE COOK,
JOSEPH R. MORRELL,
F. LEM. HUPP.

Dr. C. E. Cantrell, Texas, moved that the report be adopted as read. Seconded.

After discussion by Dr. V. G. Vecki, California; Dr. E. Eliot Harris, New York; Dr. C. E. Cantrell, Texas, and Dr. R. G. Stroud, Arizona, the motion to adopt was put and carried.

Report of Reference Committee on Hygiene and Public Health

Dr. J. W. Schereschewsky, United States Public Health Service, Chairman, presented the report of the Reference Committee on Hygiene and Public Health, and moved its adoption.

The report is as follows:

Referring to the proposed repeal by Congress of the Daylight Saving Act, your committee begs to submit the following report in relation thereto:

The national experience with the Daylight Saving Act during the past two years has shown in the opinion of the committee that the action of this bill has been wholly beneficial, not only as it added to the total of national health by lengthened hours of recreation in the open air, but it is the belief of the committee that notable economic savings have been made in the use of fuel, thereby materially assisting the conservation of national resourses, which still is and always will be essential. Your committee therefore begs to report the following resolution with the recommendation that it be adopted by the House of Delegates, and that copies of this resolution be sent, respectively, to the Speaker of the House of Representatives and the President of the Senate. Resolved that:

> WHEREAS, The two years experience of the medical profession with the Daylight Saving Act has shown that this act has added materially to the sum total of national health and vigor by the increased recreational opportunities and encouragement of outdoor pursuits which it has afforded, and
>
> WHEREAS, Through the operation of this act, material savings have been effected in the use of fuel, and
>
> WHEREAS, Continued conservation of national resources still are and always will be essential to the prosperity of the nation, therefore be it
>
> *Resolved,* That the House of Delegates of the American Medical Association vigorously protest against the repeal of the Daylight Savings Act, and that the Secretary of the Association be instructed to send copies of this resolution to the Speaker of the House of Representatives and the President of the Senate of the United States.

J. W. SCHERESCHEWSKY, Chairman.
H. A. ROYSTER,
C. D. SELBY,
V. G. VECKI.

Dr. Arthur J. Bedell, New York, presented a resolution passed by the Section on Ophthalmology on the daylight saving law, and moved to amend, which motion was seconded, that copies of the report just presented be sent to each senator and representative and also to the Speaker of the House of Representatives.

The amendment was accepted, and the original motion as amended was put to a vote and carried.

Supplementary Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr. Floyd M. Crandall, New York, Chairman, presented a supplementary report from the Reference Committee on Amendments to the Constitution and By-Laws, as follows:

1. In reference to changing the name of the Reference Committee on Legislation and Political Action to Legislation and Public Relations, your committee recommends its adoption.

2. Regarding the resolution introduced by Dr. A. N. Sinclair, Hawaii, substituting the words "state and territorial" wherever the word "state" occurs, the committee recommends that wherever practical, when constituent associations are spoken of in correspondence or in articles, the fact that these constituent asssociations are both state and territorial shall be recognized.

3. The following resolution was adopted at a business session of the Section on Dermatology and referred to your Reference Committee:

> *Resolved,* That the House of Delegates of the American Medical Association be petitioned to amend the title of the Section on Dermatology by adding to its present title the words "and Syphilis."

The committee recommends that this section be amended as set forth in the resolution, and that the amendment lie over until next year.

Submitted for the Reference Committee.

FLOYD M. CRANDALL, Chairman.

The report was considered section by section, and on three separate motions, duly seconded and carried, the report was adopted.

Supplementary Report of Reference Committee on Reports of Officers

Dr. Hugh T. Patrick, Illinois, Chairman, presented a supplementary report from the Reference Committee on Reports of Officers, as follows:

To the House of Delegates: Your Committee on Reports of Officers begs to report further as follows:

Concerning the report of the Secretary it recommends:

1. That the House of Delegates earnestly request national, state and county medical organizations to assume responsibility to returning discharged officers of the United States Army and Navy and urge these organizations to assist in every possible way such officers to reestablish themselves in civil life.

2. That the House of Delegates refer that part of the Secretary's report relating to a special authorized designation for Fellows of the Scientific Assembly to the Council on Scientific Assembly, with power to act.

Submitted for the Reference Committee.

HUGH T. PATRICK, Chairman.

At the conclusion of the report, Dr. Patrick moved its adoption, which motion was duly seconded and carried.

Supplementary Report of Reference Committee on Medical Education

Dr. J. H. J. Upham, Ohio, Chairman, presented a supplementary report from the Reference Committee on Medical Education, and moved its adoption, which motion was duly seconded and carried.

The report is as follows:

The Reference Committee on Medical Education has carefully reviewed the resolution presented by C. Van Zwalenburg concerning the designation of general practitioners as specialists, and the resolution presented by Dr. R. Winslow concerning the rearrangement of premedical education, and recommends the referring of both resolutions to the Council on Medical Education.

Respectfully submitted for the Reference Committee.

J. H. J. Upham, Chairman.

Supplementary Report of Board of Trustees

Dr. Thomas McDavitt, Minnesota, Chairman of the Board of Trustees, presented a supplementary report from the Board of Trustees, as follows:

The Board of Trustees took up the question of the next place of meeting several months ago and investigated the facilities which were available for the holding of an annual session of the Association in a number of the larger cities. The result of this investigation prompts the Board of Trustees to recommend that the 1920 annual session shall be held in New Orleans, La.

The board further recommends that the time for holding the annual session shall be referred to the board for its action. The board is of the opinion that the time for the next annual session should be in the latter part of April or the early part of May.

Thomas McDavitt, Chairman.

Dr. C. E. Cantrell, Texas, moved the adoption of the report. Seconded and carried.

An American Hospital and Postgraduate School of Medicine in London

The Speaker asked the House of Delegates whether it would receive a communication which had been submitted because it relates to a measure in which one of the delegates representing the medical profession of Great Britain is personally greatly interested. There being no objection, the following communication was read.

> It is with deep interest and gratification that the members of the American Medical Association learn of the project to establish and maintain in the city of London, England, an American hospital and postgraduate school, the school for physicians of America who desire to take advantage of the wealth of clinical material which London affords, and the hospital in part for American citizens who may become ill while abroad.
>
> The institution is to be built by American residents of London. The project which originated with Mr. Franklin, an American surgeon who is attached to the Middlesex Hospital in London, is largely in the hands of Mr. Newton Crane of the American Embassy, and of Mr. Van Duzer, who guarantee that ample funds will be provided for the purpose. The sum of £1,000,000 has been suggested.
>
> Lord Reading has been elected president, and has suggested a lay committee comprising all of the most prominent men in England. A corresponding list of prominent Americans is being selected. Hon. William H. Taft, Ex-President of the United States, has been approached in reference to his acceptance of the presidency on this side of the ocean.
>
> The medical contingent of the British committee consists of Sir Humphrey Robertson, Sir William Osler, Sir John Bland Sutton and Sir Arbuthnot Lane.
>
> It is proposed that the plan comprise three integral parts:
>
> 1. A private home or hospital for Americans abroad.
> 2. A nonpaying clinical portion of from 100 to 200 beds.
> 3. The major portion of the building to consist of a home for the American Medical Association. This will comprise lecture room, theater, library, laboratories, and all necessary equipment, and facilities for postgraduate study and research. The clinical and other materials which Great Britain affords for substudy and research will be at the disposal of American physicians who attend the school.
>
> Among the objects of the plan are the development of friendly competition in research in the field of the medical sciences, and the welding of the two English-speaking nations into one body.
>
> It is learned that it is the desire of the men in England that the American Medical Association should formulate concrete ideas for the development of this project, and that the Association cooperate with the British Committee in bringing about its consummation.
>
> Be it therefore,
>
> *Resolved,* That this matter be referred to the Council on Medical Education with instructions to report to the Board of Trustees some plan of effective cooperation of the American Medical Association with the British committee in charge of the American postgraduate medical school and hospital of London.

On motion, duly seconded and carried, the foregoing communication was referred to the Council on Medical Education.

Special Committee on Narcotic Drugs Appointed

The Speaker appointed as a special committee called for in a resolution offered at a previous meeting of the House on the question of narcotics, Dr. E. Eliot Harris, New York, Chairman; Dr. A. T. McCormack, Kentucky; Dr. Paul Waterman, Connecticut, and Dr. Alexander Lambert as member, ex officio.

Unfinished Business

Under the head "unfinished business," Dr. Reuben Peterson, Michigan, presented the following resolution, which was passed by the Section on Obstetrics, Gynecology and Abdominal Surgery:

> Whereas, An effort is being made to organize an International Congress of Obstetricians and Gynecologists at a meeting in Brussels during September next, at which American obstetricians and gynecologists will have representation, therefore, be it
>
> *Resolved,* That the Section on Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association unanimously approves of this movement, stands ready to cooperate in every way, and cordially invites the Congress to hold its initial meeting in New York at a convenient date to be determined.

Dr. H. M. Brown, Wisconsin, moved that this resolution be received and referred to the Council on Scientific Assembly.

Seconded and carried.

Dr. William Van Valzah Hayes, New York, delegate from the Section on Gastro-Enterology and Proctology, presented the following resolution, which was referred to the Council on Medical Education:

> Whereas, Medical officers who served overseas state that many soldiers among the American Expeditionary Forces suffered from diseased conditions of the rectum, requiring operation in the war zone, which should have been recognized by proper examination at some time before their embarkation, and
>
> Whereas, Increased strain on transportation and hospitalization were induced thereby; be it
>
> *Resolved,* That in order to improve the effectiveness of preparedness for possible future emergencies we recommend that suitable instruction in modern methods of rectal examination be given to student medical officers, being trained for Army and Navy service, and to this end instruct our secretary to send a copy of this resolution and recommendation to the Surgeon-General of the Army and to the Surgeon-General of the Navy, for their consideration.

Dr. Arthur T. McCormack, Kentucky, requested unanimous consent to introduce a motion to reconsider the actio taken in adopting the report of the Reference Committee on Reports of Officers, which action was taken at the last meeting of the House.

He stated that his purpose in asking for the consideration of a motion to reconsider, is that an amendment may be made to the report by adding a recommendation that in the execution of the laws and regulations pertaining to child welfare and child education, the House shall recommend that these executive functions be exercised, when they are within the scope of the federal government, by the United States Public Health Service, and all questions falling within the jurisdiction of the states shall be exercised by the respective state departments or boards of health. Unanimous consent having been granted, Dr. McCormack introduced a motion to amend the report as stated above and to adopt the amended report, which was seconded.

After discussion by Dr. M. L. Harris, Illinois; Dr. J. W. Schereschewsky, District of Columbia, and Dr. Isaac A. Abt, Illinois, the report, as amended, was adopted.

Dr. E. Eliot Harris, New York, asked unanimous consent, which was granted, to bring a matter before the House, and requested the Vice Speaker to take the Chair.

The Vice Speaker took the Chair.

Dr. Harris then moved that the House of Delegates express its appreciation and good will to the Speaker by a rising vote.

Motion seconded and unanimously carried.

Dr. Arthur T. McCormack, Kentucky, moved that a rising vote of thanks be extended to the members of the Local Committee of Arrangements and to others who have contributed to the success of this Victory Meeting.

Seconded and carried.

As there was no further business to come before the meeting, the Speaker declared the House of Delegates adjourned sine die.

THE SCIENTIFIC ASSEMBLY

THE OPENING GENERAL MEETING

Tuesday Evening, June 10

The opening meeting of the Association was held in the Music Hall of the Steel Pier, and was called to order at 8:30 p. m. by the President, Dr. Arthur Dean Bevan, Chicago.

Music was rendered by the Philadelphia Navy Yard Band of twenty-three pieces.

A number of past presidents of the Association, members of the Board of Trustees, and foreign guests occupied seats on the stage.

Prayer was offered by Abner H. Lucas, Ph.D., D.D., Atlantic City.

President Bevan introduced Dr. Emery Marvel, Chairman of the Local Committee of Arrangements, who called attention to the list of entertainments provided for the members and guests.

Addresses of Welcome

Hon. Harry Bacharach, Mayor of Atlantic City, was introduced, and delivered the following address of welcome:

ADDRESS OF WELCOME BY MAYOR OF ATLANTIC CITY

Mr. President, Ladies and Gentlemen, and Distinguished Guests from Foreign Lands: I am sure you all know that it is a mere matter of form for me to welcome you to this great playground of ours and to this great convention city of America, because every one in this country surely must know that the American Medical Association is welcome, not only to Atlantic City but to any city in this great country of ours. The men and women of your profession, who so unselfishly and loyally performed their work not only in this country but also on foreign shores, and who, when the great epidemic of influenza struck this country, cared not for finances or even their own health, deserve great credit, because they were willing to sacrifice all that lives might be saved.

We, in Atlantic City, are proud of many things. We are proud of our magnificent boardwalk, five miles long and 100 feet wide, where half a million people promenade at one time, where you never see any one acting in an unbecoming manner, where women unaccompanied are not molested by any one. We are proud of our magnificent force of ninety life guards, who protect the lives of more than 5,000,000 people that bathe here in the summer season, without a single loss of life by drowning.

We are proud of our magnificent streets, which are better lighted, better paved and cleaner, we believe, than any other city in the United States. We are proud of our magnificent hotels, in which we feel you can get more for your money than in any other hotels in the country, where a person of the humblest means can come and enjoy himself along with the rich. But above all, my friends, in this great playground of ours, there has not been a call of our county for any loan or any drive in which Atlantic City failed to go over the top. From this city, more than 3,500 of the best young manhood responded to our country's call. (Applause.) When the war first broke out, we did not wait for Congress to act, but we organized a Liberty Club, so that everybody in this city from the humblest walks in life to the proprietors of our magnificent hotels became members. We took care of the dependents of our soldiers and sailors in a fitting manner. (Applause.)

While in this city we want all of you to make yourselves at home, and particularly our foreign guests. We want in this country nothing but 100 per cent. American citizens. We believe that the Bolshevik or any of his type who is not satisfied to fight and even die, if necessary, for Old Glory, should go back to the country from which he came, and not stay in this great and glorious country of ours. (Applause.)

This war has taught us one important thing: that there is no North, there is no South, there is no East nor West.

In behalf of the citizens of Atlantic City, I desire to present to you and through you, Mr. President, to this convention, our best wishes that your stay here will be a pleasant one; that it will be profitable and beneficial, not only to your profession but to the United States and to the world at large. So on behalf of its citizens, I want to present to you, not only the key to Atlantic City, but the key to the hearts of the people of this city. [Here the mayor handed the key to President Bevan.] (Applause.)

President Bevan said: In the name of the Association, we accept this welcome. If any of you lose your night key and this meeting adjourns very late, I will lend you this key, which will unlock any one of the thousand hotels in Atlantic City. I am now going to call on the president of the oldest state medical society in the Union. It is more than 150 years old. I take great pleasure in introducing to you Dr. Thomas Harvey, President of the Medical Society of the State of New Jersey.

ADDRESS OF WELCOME BY DR. HARVEY, PRESIDENT OF MEDICAL SOCIETY OF THE STATE OF NEW JERSEY

Mr. President, Fellows and Guests of the American Medical Association, Ladies and Gentlemen: It is my pleasant duty to represent the Medical Society of the State of New Jersey in welcoming the members of the American Medical Association to the shores of our compact little state; a welcome that is universal. From the wooded dells of Sussex to the shining sands of Cape May, nowhere in the world is there a convention city so well suited to your purpose; for whether you come for scientific instruction, or the improvement of your health, or just for the happiness of your souls, it is most fitting that our state society should join in this welcome, because, as has been said by President Bevan, we are the oldest medical society in the Union, and have a sort of grandmotherly interest in all societies, especially this, which is reaching its seventieth birthday. Moreover, this year, of all years, we should gather here at this Atlantic seashore and recall the fact that one year ago this shore was in the war zone and exposed to bombardment, and that now we have reached the piping times of peace when our minds are free from the horrors of impending invasion.

We also welcome the great army of medical men, over 35,000 strong, who sacrificed all that life might be made worth while and laid on the altar of their country their wealth of experience and knowledge, the result of many years of hard work, their love of home and family, their hopes for the future, and even life itself, that our army and navy should have everything that modern science has to offer for safeguarding and rehabilitation.

We also welcome the other great army of medical men who were compelled to remain at home, who gave much thought and labor and time to the work of selected service in the preliminary examination of our soldiers. There was no more wonderful demonstration of the prompt efficiency of our people in the whole course of the war.

We also welcome the medical men of our allies, who bore the burdens of the day, meeting the new problems in war time surgery, with such wonderful skill and devotion, so that when at last we entered the war, we found that the principles underlying the work had been so thoroughly worked out that our men had only to study and apply details.

We welcome also that devoted band of American physicians who from the outbreak of the war in 1914 rushed over to the assistance of their European brothers and aided much, as we know, in establishing the surgical treatment of wounds on a sound foundation.

We also welcome here those noble souls who, in the trenches and in No Man's Land, offered up the supreme sacrifice; and this spirit we feel sure is here in attendance at this VICTORY MEETING, watching to see if we are faithful to our trust and to carry on as they did in our divinely appointed office, carrying succor to those afflicted with disease.

We certainly can take great pride in the work that the doctors have done in this world war and in the great reduction of permanent casualties that they have effected.

We in New Jersey are also pround of the fact that one third of the membership of our state society volunteered in the service.

Our duty of the future is to enlarge and strengthen our organization in all its ramifications, so that we may be prepared for the tremendous social changes that are threatening the peace of all classes of society. If the doctors are to keep medicine as one of the liberal professions, we must antagonize all efforts to reduce it to a trade. But if it is to be a trade, we must organize as efficient a union as possible and use union methods for our protection. (Applause.)

President Bevan said: I regret exceedingly that I have to announce that the Honorable Walter E. Edge, governor of New Jersey, United States senator-elect, has been unavoidably detained and will not be here with us tonight.

REMARKS BY PRESIDENT BEVAN IN INTRODUCING SURGEON-GENERAL IRELAND

One year ago the American Medical Association held a great war meeting. It was a call to the medical profession to organize for war. We asked for the necessary medical officers for an army of 5,000,000 men or more and for a navy of a million men if it was needed. The call was answered promptly and magnificently by the organized medical profession of the country. Within six months from that time 50,000 medical men and women had offered their services to the government, and almost 40,000 had been accepted and received their commission. At that meeting few of us dreamed, none of us dared to hope, that within six months the brutal military power that had forced us into war would be broken and would be humbly suing for peace. (Applause.)

The war was won when America threw the weight of its unlimited resources and its hundred million people into the scales on the side of humanity. The war was won by the hundreds of thousands of men who volunteered and by the 23,000,000 who gladly and without protest answered the call of the draft to the colors. The war was won not by the professional military establishment but by the men who were called from civil life into military service and were rapidly trained and organized into a great and efficient military machine. When the war began, the medical department of the army consisted of less than 500 medical officers. When the war ended, the medical department consisted of 34,000 medical officers and 250,000 men and women. (Applause.) Ninety-eight per cent. of the personnel of the medical department were called from civil life. The small regular medical department furnished the leaven, but the great mass came from the civilian population. Ninety-eight per cent. of the work of the medical department was done by the civilian physicians and the Red Cross nurses and the boys from all walks of life who volunteered or were drafted into the medical service.

The war has been won, and we are assembled here at a great victory meeting of the organized medical profession of the country. We are here to pay tribute to the medical men and women who served their country in this war. We are here to pay a tribute to the men and women who died in the service of their country. In sorrow, and in gratitude that they served their country and humanity so well, we place a wreath of flowers on their grave.

We are here to pay tribute to the men and women who served and whose health was shattered in the service. We owe them a great debt—a debt that should be paid as far as it can be paid by a grateful country and a grateful profession.

We are here to pay a tribute to the men and women who are returning strong and well from military service abroad and the cantonments in this country, back to their homes and their civilian practice. We join with their families who with tears of joy have welcomed them home. They sacrificed much, but they come back to us broadened and strengthened. Their services have earned for them special recognition and the support from the communities in which they live and their colleagues. (Applause.)

We are here to pay a tribute to the regular medical officers of the army and navy for the efficient services which they rendered in training the thousands of medical men coming from civil life in the work of the military surgeon.

We are here to pay a tribute to Surgeon-General Gorgas (applause), to Surgeon-General Ireland, and to Surgeon-General Braisted for their able leadership. (Applause.) We are here to pay a tribute to the great teachers of medicine and surgery and hygiene and the medical and surgical specialties who at once volunteered and gave the government and the troops the benefit of their special knowledge and expert advice.

We are here to pay the greatest tribute to the rank and file of the medical men who served where they were placed without special rank or special distinction, for the work of these men outweighs and overshadows all the rest. (Applause.)

We are here to pay tribute to the 30,000 medical men who served on the draft boards and advisory boards. These men rendered valuable services to their country.

The war has been won. The great military force in khaki and in blue is fast fading back into civil life. The medical profession of the country can well be proud of the great part which it has played. To realize the magnitude of our effort it is but necessary to state that within a short time we developed a greater medical service than that of England, France, Belgium, Canada and Australia combined. (Applause.) Our best men entered the service. Our soldiers and sailors were given the best of medical care and surgical skill. In such an enormous task of creating within a short time a great and efficient medical service, there was necessarily some confusion, some friction, some oversights, some mistakes; but when one looks at the sum total of the accomplishment of the medical profession of America in this war, we are proud of both our profession and our country. (Applause.)

This meeting of the American Medical Association is a great victory meeting, and we have invited to it members of the medical professions of the countries which were our allies in the winning of the war, and which are now our allies in the peace we hope will make the world safe for democracy. We welcome them to America. We welcome them to this meeting of the American Medical Association. We extend to them our hand in friendship and in the fellowship of science.

These men come as the guests of the American Medical Association. They have served in the military service of their own countries. It is, therefore, eminently fitting and proper that they should be welcomed here by a representative of the medical services of our government. It is my great privilege, as President of the Association, to ask one who served his country with distinguished ability both on the battlefields of France and in organizing the medical department at Washington, to welcome our guests and introduce them to you. I have the honor to introduce Surgeon-General Ireland. (Applause.)

ROSTER OF INVITED GUESTS

Surgeon-General Ireland called the roster of invited foreign guests, and as the name of each was called, the introduction was acknowledged.

England was represented by Lieut.-Col. Sir Shirley Murphy, Sir William Arbuthnot Lane, Sir St. Clair Thomson, Sir Arthur Newsholme, Rear Admiral Edgar R. Dimsey, Dr. Ernest W. Hey Groves, Dr. Frank Atcherley Rose, Dr. Arthur F. Hurst and Mrs. Eleanor Barton.

France was represented by Major Fernand Lemaitre, Dr. P. Bégouin, Dr. Robert Picqué, Dr. Maurice Heitz-Boyer, and Dr. C. Mullon.

Belgium was represented by Gen. L. Melis, Col. Antoine Depage, Lieut.-Col. P. Nolf, Professor Duesberg, Captain Van de Velde and Dr. Réné Sands.

Greece was represented by Drs. John Constas, G. Gavaris, Constantine Caroussos and Alexander Alexion.

Japan was represented by Drs. Asajiro Kamimura, Senichi Uchino and Ryuzo Kodama.

China was represented by Drs. S. T. Lee, William Wesley Peter, Chang Ting-Han and Hsu Ming-Shoo.

India was represented by Belle J. Allen.

Cuba was represented by Drs. Juan Guiteras, Emilio Martinez, Julio Carrera and Francisco M. Fernandez.

Argentine was represented by Dr. Pedro Chutro.

Ecuador was represented by Dr. E. L. Kingman.

Peru was represented by Dr. Alejandro Acha.

Norway was represented by Dr. Peter F. Holst.

Sweden was represented by Dr. Israel Holmgren and Sven Ingvar.

ADDRESS OF SURGEON-GENERAL IRELAND

After introducing the foreign guests, Surgeon-General Ireland said:

Ladies and Gentlemen: Two years ago this evening an advanced party of the American Expeditionary Forces landed in France. From that day they received every possible assistance and courtesy from the medical departments of the allied armies. They had been in this war three years before we joined and had learned many things which we knew nothing about and could only learn by practical experience. The war, as you know, was carried on in the trenches, and this produced new elements in caring for the wounded and taking care of the sick. New methods had been developed in caring for the wounded at the casualty clearing stations and base hospitals. Great advances had been made in war surgery, which our surgeons were not familiar with. New methods had been developed of evacuating a great number of the sick and wounded to the base and home port medical departments of the allied armies Through the surgeons in Great Britain at their front area, we were made familiar with the new forms of warfare in the trenches, where our surgeons learned new lessons in war surgery and were made familiar with the underlying principles in the care of the wounded and in many modern ways of evacuating them to the base hospitals

We went to France when that country was greatly exhausted in man power and material, by months of cruel war. The problem of hospitalization to take care of the thousands of sick and wounded that were there was a tremendous one. We received the most cordial support from the medical departments of the allied armies in meeting this problem. They gave us many hospitals, which amounted to thousands of beds and assisted us in locating other hospitals. Not content with this, their surgeons came in great numbers to Paris for the purpose of attending the meetings of the Research Society, and they gave us freely of their newly acquired knowledge. In these ways and in many others, too numerous to mention, our associates in Europe assisted us with that sympathy and teamwork which should always characterize the medical profession.

Gentlemen, delegates and guests, it is a great pleasure to welcome you to this VICTORY MEETING of the American Medical Association, and a privilege, a rare privilege, to present you, as invited guests, to its members. (Applause.)

President Bevan said: My next duty is one that is very pleasing to me. The American Medical Association at its last meeting honored a man by electing him to the presidency of the Association; a man who stands for the best in American medicine. They honored him because he had done such splendid work in the organization itself. He had devoted years of his time and energy to elevating the standards of our professional work by putting his shoulder to the wheel in the machinery of the American Medical Association, and had accomplished a great deal of good. They honored him because he was one of the first men to answer the call and don the khaki-colored uniform of the medical department. The American Medical Association has honored many great and worthy men by electing them to the presidency of the Association. It has, however, never bestowed this honor more worthily on a man who deserves it more and who will fill the office with greater efficiency than Alexander Lambert, and I have the great pleasure of introducing him to you. (Applause.)

ADDRESS OF THE PRESIDENT, ALEXANDER LAMBERT

Before delivering his address as President of the American Medical Association, Dr. Lambert said:

Mr. President, Invited Foreign Guests, Ladies and Gentlemen: It is with keen pleasure that I desire to make my first official act as president of this Association an act of welcome to the members of the allied army, whom I had learned to know abroad, and I am indeed happy to be the one that thrice welcomes them here, and to add my welcome to the others that have already been extended.

It means new friendships and a new fellowship in medicine; it means the cementing of the fellowship and friendship that we found abroad when we went as strangers to a foreign land. It means more than any words can express, and the welcome that I bid you, gentlemen, is one which in its heartiness and in its sincerity is very deep indeed. It represents the friendship of the American Medical Association; it represents in turn the comity of the American Medical Association in the fellowship of medicine of its friends abroad. Thrice welcome are you, and welcome indeed. (Applause.)

President Lambert then delivered his address, which was published in THE JOURNAL, June 14, 1919, p. 1713.

THE VICTORY MEETING

Wednesday Evening, June 11

The VICTORY MEETING of the Association was held, June 11, with the President, Dr. Alexander Lambert, in the chair.

GENERAL F. A. WINTER, representing the U. S. Army, stated that during the war many able, large-minded, energetic and capable men had given up the possibilities of large lucrative practices to serve with the army, while others had adopted it as a life-time calling. Before the present war, but few knew anything about the medical conditions of the army. Now, with the backing and support that were formerly lacking, great improvement has resulted. The whole medical corps, supported by the American Medical Association and kindred organizations, deserves great credit for what has been accomplished.

COMMANDANT JAMES R. PHELPS, representing the U. S. Navy, said that the death rate of the navy for the first year of the war was lower than for the previous year of peace, and that the death rate for disease of the entire navy for the whole period of the war was so low that it reflected great credit on the medical profession of the United States and the medical corps of the navy, as well as on the Surgeon-General because of his able leadership. The death rate for the whole period of the war was 8.8, the lowest death rate that has ever been reached by the naval or military service of the United States at war.

Dr. C. C. Pierce, representing the U. S. Public Health Service, referred to the various activities of this service during the war and of how military needs caused a great increase in the manufacture of biologic remedies, such as serums, antitoxins and vaccines, all of which had to be tested and their standardization supervised by the hygienic laboratory of the service. One of the great pieces of work done by the United States Public Health Service was the creation of sanitary zones in the areas immediately surrounding the various cantonments.

Dr. Livingston Farrand, representing the American Red Cross, referred to its activities and achievements. From observations made during the first nine months after the United States entered the war and before our army had reached France, the Red Cross was a most powerful agency in upholding the morale of the French people, which was at a low ebb in the spring of 1917. The American Red Cross was likewise a powerful agency in winning the war. He paid an eloquent tribute to the women of America for having quickly prepared 300,000,000 surgical dressings. Everything was done by them that was called for.

Col. Henry B. Birmingham, representing the Association of Military Surgeons, stated that the membership of this association was now nearly 9,000, and as a result of the recent war he expressed the hope that the membership of this organization would be materially increased.

Dr. Lee K. Frankel, representing the American Public Health Association, spoke of the activities of this body, what it had accomplished, and what it hoped to do in the future with reference to preventive medicine.

Dr. David R. Lyman, representing the National Association of Tuberculosis, stated that the recent war made us realize the extent to which chronic diseases, tuberculosis, venereal diseases, etc., weighed on us and impeded progress. There were 61,964 men rejected on account of tuberculosis by the draft boards throughout the United States. His message to the people was that we must have universal military service, primarily, as the greatest of all public health measures.

Dr. Franklin H. Martin, representing the American College of Surgeons, recounted the activities of the members of this organization during war, stating that its membership was 4,000, 400 of whom were from the Provinces of Canada. Along with other societies, the members of the American College of Surgeons had offered their services to the government. He urged the 115,000 physicians who had offered their services so magnificently to the country to still stand by the government. They should not think of their disappointments but of the necessity of working for and aiding the government at all times.

THE SECOND VICTORY MEETING

Thursday Evening, June 12

This meeting was held in the Garden Pier, June 12, at 8:30 p. m., with President Lambert in the chair.

Dr. George E. Brewer, New York, spoke on some of the problems encountered by the medical department of the American army in the actual theater of war. A great change and great improvement in results had taken place in the treatment of medical and surgical conditions during the two or three years since the commencement of the war. He had received two vivid mental impressions. In the early spring of 1915, during the end of the first year of the war, he was on the staff of a small hospital near the front, associated with the sixth French army. He vividly recalled his first visit to a large hospital shortly after a sharp engagement in the neighborhood with every battle casualty of the graver type. During this visit he was deeply impressed by the evidence of great illness on the part of the wounded soldiers who occupied beds. One could see the hectic flush of sepsis, the patients lying with sunken eyes and with evidence of great prostration. There was not a single case of compound fracture that was not the seat of profound, deep seated infection. There was not a thoracic wound that was not accompanied by a grave complication of pneumonia or empyema. There were more cases of gas gangrene than he had previously seen in his entire professional life. The whole impression was one of surgical disaster because the soldiers were not receiving the best treatment on account of these conditions. All recognized that the wounds of this war differed from the wounds of civil life as they likewise differed from wounds in previous wars in their general character and extent, in their amazing multiplicity, and in their shocking and paralyzing effects from high explosives, with cruel lacerations of tissue and the highly virulent infections which accompanied them. How best to prevent or combat infection was the great problem of the military surgeon.

The second picture that Dr. Brewer painted occurred in the summer of 1917, when he went to France with the hospital unit with which he was connected. Of the military hospitals he saw shortly after arriving, none was so well equipped and so well organized as that under Professor Depage. In this hospital, with battle casualties of the same general character as he had previously mentioned, there was little evidence of sepsis. As one went through the wards, the patients looked cheerful and on the road to recovery. While there were some exceptions, the majority of patients looked well and were far from manifesting any depression. As he went into the operating and dressing rooms he saw that scrupulous technic always characteristic of this particular hospital. He saw no sepsis, and as a matter of fact, of the thousands of patients in that hospital there were very few suffering from septic infection. The picture in three years had undergone a remarkable change, as the result of three factors: First, a general recognition of the fact that the plan carried out in the beginning of the war of having the larger and most important hospitals and best surgeons in the rear was a failure. It was a great mistake. Second, there was developed during that period a splendid, careful, scrupulous technic which did much to overcome infection in battle casualties. Third, there was a general recognition of the fact that the golden opportunity was found to be between the receipt of the wound when it usually became contaminated and the point at which infection took place in the tissues, and if it were possible to receive wounded soldiers during that period, and careful débridement, first suggested by Professor Le Maitre, was carried out, the results were really remarkable.

Lieut.-Col. Sir Shirley Murphy, England, said that victory was never attained without some misfortune and loss of life. One of the most important events that had happened as a result of the war is that the two great nations, the United States and Great Britain, found they had interests in common, a community of interests, and a community of ideals. Both nations were striving to move forward hand in hand. This idea on the part of both nations had manifested itself very strongly during the last three or four years and could not help but be of enormous benefit to mankind. Of the various professions, the medical profession had done more than any other in the valuable service it had rendered to humanity.

In England they were contemplating work along the same lines that were being thought out in America, namely, a ministry of health, the inspection of schoolchildren, the inspection of boarding houses, of dealing with prenatal conditions—in a word, following the child from the cradle to the grave, or even before it is born.

Another point made manifest as a result of the war was the need for improvement in education, not only in the early days of the student's career, but in postgraduate training, so that there had been set up in Great Britain postgraduate lectures which enabled the members of the profession to keep in touch with the more recent knowledge which was from time to time being disseminated.

Rear Admiral Edgar R. Dimsey, England, said he considered it a great privilege and honor to bring good will from the British Navy Medical Society, to which he had the honor to belong, to the members of the American Medical Association. He expressed his appreciation of the extreme courtesy and kindness he had received from members of the medical profession in America, and that it would be his privilege and great pleasure to carry back to England the happiest memories of his visit to the great Victory Meeting of the Association.

Dr. Senichi Uchino, Tokyo, Japan, said that as a representative of his country he deemed it an honor to express his great pleasure at being present on this auspicious occasion. He emphasized the great work that the medical profession of America and of other countries had done during the recent war, both in the Army and the Navy, in working for a cause which reflected, not only the patriotism of their own country, but striving for justice to humanity. He referred to the progress made in sanitation and in the prevention of disease by American physicians, saying that it was remarkable, and that it had made a profound impression on the members of the medical profession of Japan. Japan owed much to America for the great progress made in the treatment of wounds during this war. He thanked the Association for the opportunity of addressing the members at this Victory Meeting and for the uniform courtesy and kindness extended to him as a representative of Japan.

Major S. T. Lee, China, said he considered it a great honor and pleasure to be present at this historic gathering of the American Medical Association, an Association which had no rival in its achievements in the world. He thanked the Association for the many courtesies extended to him personally, and above all he would carry away with him some very pleasant remembrances of his visit to the United States of America.

Surgeon-General Melis of the Belgian army said he felt much gratified to have the opportunity to bring cordial and fraternal greetings from the Belgian Medical Board to the United States. It was a great honor to take part in this Victory Meeting in America, a country which had given to the world so many great and generous ideas. In the recent war America had not only given freely of her immeasurable supply of men and material, but had done much for the great cause of justice and for the freedom of mankind. This war would redound to the glory of America. He predicted that this Victory Meeting would result in a stronger and more enduring fellowship among the members of the medical profession of the world. America, he said, had been a mother to Belgium, and he expressed the hope that the United States would continue to be a godmother of Belgium in every way in the future. In his double capacity as surgeon-general of the Belgian army and as president of the Belgian Red Cross, he extended his deepest gratitude and hearty appreciation to the whole people of America.

Col. J. S. Easby Smith, of the selective service regulations, Washington, D. C., stated that during the eighteen months of the draft there were 155 district boards, 12,079 local boards, and a total number of medical advisory boards of 9,577. The total number of physicians who actively and continuously, at an enormous sacrifice, aided in the selective draft was 26,419. One should bear in mind that there were 40,000 physicians acting in some capacity or another in the Army and Navy. The total number of registrants physically examined during the entire period of the draft was 5,719,152.

Colonel Smith then read extracts from General Crowder's report to the Secretary of War and to Congress, in which eloquent tribute was paid to the labors and efforts of the American Medical Association and the medical profession during the great crisis. Finally, during this present period of unrest, of reeducation and rehabilitation of our men, he urged the physicians of the United States to devote themselves to patriotic efforts in helping to carry on this great work.

The meeting was also addressed by Major Paul Bégouin, Bordeaux, France, and by Dr. Alexander Alexion of Greece, after which the meeting adjourned.

THE SCIENTIFIC EXHIBIT

The exhibits in the various booths in the Casino were as follows:

1. Exhibit of United States Department of Agriculture, Bureau of Chemistry.
2. Bureau of Census. Numerous charts showing rise and fall in the number of cases during the recent influenza epidemic.
3. Researches of toxic action of mustard gas, University of Michigan, by Dr. A. S. Warthin, and Dr. Carl V. Weller, showing lesions produced by mustard gas in various parts of the body.
4. Mayo Clinic. Treatment of high grade myxedema with thyroxin. Determination of metabolic rates following its injection. Studies on cholesterol. Isolation and identification of thyroxin. Roentgen-ray exhibit of mediastinal tumors, Hodgkin's disease, primary cancer of the lungs, cancer metastasis, gastric syphilis, and chronic ulcerative colitis. Experimental influenzal pneumonia by Edward C. Rosenow.
5. American Red Cross, first aid department. Numerous illustrations and diagrams of how to render first aid.
6. Council on Pharmacy and Chemistry of the American Medical Association. Exhibit of some of the work the Council has done, with literature on the subject.
7. Chemical Laboratory of the American Medical Association. Investigations the laboratory has made, and literature on the subject.
8. Propaganda Department, showing the work The Journal of the American Medical Association is doing in bringing to the attention of the public the facts regarding the nostrum evil and quackery, illustrated by numerous charts and booklets.
9. Council on Health and Public Instruction. In this booth there were a number of cartoons and hygiene charts and posters on baby welfare, together with a set of various booklets on child welfare, care of the baby in summer, and other publications of the Council.
10. Research Laboratory of Dr. Fenton B. Turck, New York. Work on autolysis and shock.
11. Exhibit of stereoscopic roentgenograms and stereo-Lumière photography by Dr. Emil G. Beck, Chicago.
12. Exhibit of roentgen-ray department, St. Luke's Hospital, New York.
13. Exhibit by members of the staff of the Battle Creek Sanitarium. Exhibit on dietetic management of diabetes. Roentgen-ray exhibit of gastro-intestinal diverticulosis, with duodenal diverticula. Roentgen-ray studies on the diagnosis of acute postoperative ileus. Some electrocardiagraphic studies and demonstrations of the technic and value of the Bergell carbohydrate tolerance test.
14. The Lying-In Hospital of the City of New York. Numerous charts of cases of normal pregnancy and charts of cases of preeclampsia and eclampsia.
15. Children's Bureau, United States Department of Labor, showing deaths under 1 year of age, grouped by cases; also deaths under 1 year of age by monthly age group, and reduction in infant mortality according to fathers' earnings.
16. Radium Therapy, by Dr. D. T. Quigley, Omaha. This was an excellent exhibit showing the results of the action of radium in cases of epithelioma, sarcoma, myxosarcoma, etc.
17. Charts of operations on the gastro-intestinal tract, based on physiology of the stomach and intestine, by Dr. J. Shelton Horsley, Richmond, Va.
18. Exhibit of chronic gonorrheal infections of the seminal vesicles, by Dr. Victor C. Lespinasse, Chicago. New technics on how to treat the chronically infected vesicle through the vas deferens. Percutaneous puncture of the vas and sensitiveness of the epithelium of the vas to irritants. Many of the commonly accepted antiseptics that are considered nonirritant will absolutely destroy the epithelium of the vas, producing stricture and consequent sterility.
19. Exhibit of Prudential Insurance Company, Newark, N. J., showing charts of influenza and respiratory diseases

in nine American cities during the epidemic period of 1918; also charts showing the prevalence and number of cases of influenza in England and Wales for several periods.

U. S. ARMY EXHIBIT AT EXPOSITION BUILDING

In connection with the Victory Meeting there was an exhibit at the Exposition Building by the Medical Department of the U. S. Army. There were seventeen different exhibits, covering all phases of the work which has placed the medical department on the high standard that it now enjoys.

The laboratory section showed the control of diseases in the various camps and also some excellent pathologic specimens, while the tests for the aviation service were very interesting. The sanitation exhibit had a complete set of sanitation models and photographs and charts illustrating methods of sanitation in the various camps and cantonments.

The section of reconstruction had complete work shops with the boys themselves at work, showing methods of education of wounded men.

The hospital division gave a complete description of the method of handling patients on their arrival at a hospital from overseas and their assignment to the proper wards. There were models of base hospitals and general hospitals. The division of surgery illustrated roentgen-ray work in the hospitals and in the fields, and many different styles of splints and their application were to be seen in the orthopedic section.

Perhaps the greatest success of surgery of the present age was shown in the maxillofacial section, where plaster and wax models of faces were to be seen, showing the work that was accomplished in this art during the great conflict.

The exhibit from the Army Medical Museum at Washington showed the treatment of wounds and skin diseases as perfected by the army medical department.

U. S. NAVY EXHIBIT AT EXPOSITION BUILDING

The U. S. Navy exhibit was carefully planned to represent the various activities of the medical department, and was arranged in such a way that it gave an excellent idea of the manner in which the recruits were received into the service and the provisions which were made for their medical care under the various conditions which might arise in the course of their service in the navy. The measures for the protection of the health of the naval personnel on board ship were exhibited by means of models of the battleships and other types of vessels. A large model of the medical department of one of the latest dreadnaughts presented an interesting picture of the medical and surgical facilities on board.

The arrangement for receiving and training recruits, and the methods of eliminating and controlling communicable diseases at training stations, were demonstrated by means of accurate models of dispensaries and isolation cubicles and by mechanical drawings.

For those who were interested in the more technical methods there was a complete mobile laboratory unit at work, illustrating the navy technic for the detection of meningococcus and diphtheria carriers; methods of preparing culture mediums, and the use of specific therapy.

The valiant land army, the marines, who formed a part of the navy, were represented by models and other interesting material from the great training center for the marines at Quantico, Va. Here was presented a very complete picture of the methods which were used to control an extensive malaria problem. By means of models, there was presented the work which was done to control thoroughly a large mosquito-breeding area.

One of the great activities which fell to the navy during the war was the transportation of the troops to and from Europe. This was represented by a model of the largest naval transport, the U. S. S. *Leviathan,* which showed how more than 10,000 troops were berthed and cared for during each trip.

The work of the central organization, the Bureau of Medicine and Surgery, was indicated by many charts, which showed the methods for the prevention and control of communicable diseases and for keeping constantly informed of health conditions in the navy, scattered as it was all over the world.

Among other things were shown complete statistics for influenza, tuberculosis and the venereal diseases.

Award of Prizes in the Scientific Exhibit at the Victory Meeting

The committee had great difficulty in judging between individuals and large organizations, such as government departments, representing an extensive corps of unnamed workers. In consideration of the manner in which awards have been made in the past, the committee felt that its functions would be best performed by laying emphasis on the excellence of individual effort. Accordingly, the awards are as follows:

Gold Medal—Dr. H. S. Warthin.
Silver Medal—Hideyo Noguchi.
Certificate 1—The Mayo Clinic.
Certificate 2—Dr. J. Shelton Horsley.

The committee desires to express its high appreciation of the interest and educational value of the U. S. government exhibits, and feels called on to commend those who have been instrumental in bringing to this meeting these splendid displays. The committee feels that special recognition should be given to the demonstrations made by the Medical Department and the Army and Navy, and by the Public Health Service.

Walter Cannon,
E. R. LeCount,
C. C. Bass.

FOREIGN DELEGATES AND GUESTS AT THE ATLANTIC CITY SESSION

Physicians from fourteen foreign countries were in attendance at the Victory Meeting. A list of these foreign guests follows:

Lehman, Wilmer S., Lolodorf, Cameroun, W. Africa
Casier, Baron Ernest, Belgium
Depage, Antoine, Belgium
Duesberg, J., Belgium
Melis, L., Brussels, Belgium
Nolf, P., Brussels, Belgium
Sand, Réné, Brussels, Belgium
Captain Van de Velde, Belgium
Chutro, Pedro, Buenos Aires
Aikins, W. H. B., Toronto, Can.
Bagshaw, Elizabeth, Hamilton, Can.
Buchanan, W. D., Peterboro, Ont.
Chartier, Aimé, Sorel, Quebec, Can.
Cleaver, Ernest E., Toronto, Can.
Clendenan, G. W., Toronto, Can.
Cody, William, Hamilton, Can.
Craig, Robert H., Montreal, Can.
Dibbie, W. J., Weston, Can.
Dixon, W. E., Grand Mere, Can.
Ewing, Francis James, Vancouver, Can.
Farris, H. A., East St. John, N. B.
Ferguson, W. A., Moncton, Can.
Fleming, Francis P., St. John, N.B.
Gallivan, James V., Peterboro, Can.
Hastings, Chas. J., Toronto, Can.
Hicks, E. S., Brantford, Can.
Hill, Clarence E., Toronto, Can.
Johnston, Samuel, Toronto, Can.
Kendall, W. B., Gravenhurst, Ontario, Can.
Lauterman, Maxwell, Montreal, Can.
Mallory, Fred, Toronto, Can.
Mann, Arthur H., Olds, Alberta, Can.
Minns, Fredk. S., Toronto, Can.
Mitchell, J. P., Toronto, Can.
Mowbray, F. B., Hamilton, Can.
Mullin, R. H., Vancouver, B. C.
Neal, Frank C., Peterborough, Can.
Rabinowitch, I. M., St. Anne de Bellevue, Quebec, Can.
Rawley, W. E., St. John, N. B.
Ross, George T., Montreal, Can.
Starr, Clarence L., Toronto, Can.
Sutton, A. B., Port Credit, Can.
Waldron, C. W., Montreal, Quebec, Can.
Willinsky, A. I., Toronto, Can.
Wishart, D. J. Gibb, Toronto, Can.
Young, William A., Toronto, Can.
Lee, S. T., Peking, China
Leonard, Eliza E., Peking, China
Ming-Shao, Hsu, China
Peter, William Wesley, Shanghai, China
Ting-han, Chang, China
Almila, E., Havana, Cuba
Carrera, Julio, Cuba
Fernandez, Francisco M., Havana, Cuba
Guiteras, Juan, Cuba
Martinez, Emilio, Cuba
Somodevilla, Santiago U., San Luis, Cuba
Kingman, E. L., Zaruma, Ecuador
Brown, W. Herbert, Glasgow, Scotland
Dimsey, Edgar R., British Admiralty
Groves, Ernest W. Hey, England
Hurst, Arthur F., England
Lane, Sir William Arbuthnot, England
Murphy, Shirley, England
Newsholme, Sir Arthur, England
Rose, Frank A., London, Eng.
Thompson, Sir St. Clair, London, Eng.
Bégouin, Paul, Bordeaux, France
Lemaitre, Fernand, France
Picqué, Robert, Bordeaux, France
Alexion, Alexander, Greece
Constas, John, Greece
Allen, Belle Jane, Baroda, India
Fletcher, A. G., Taiku, Japan
Kamimura, Asajiro, Tokio, Japan
Kodama, Ryuzo, Japan
Uchimo, Senichi, Tokio, Japan
Holst, Peter F., Norway
Muro, Felipe, Lima, Peru
Ingvar, Sven, Lund, Sweden.

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SATURDAY, JUNE 21, 1919

THE SPIROCHETE OF INFECTIOUS HEMORRHAGIC JAUNDICE IN AMERICA

Only a few years have elapsed since Inada and Ido inoculated guinea-pigs with the blood of patients suffering from a form of infectious jaundice resembling Weil's disease and thus transmitted an experimental malady accompanied by jaundice, hemorrhage, albuminuria and other characteristic symptoms. The Japanese investigators then discovered both in the blood and various organs of the animals and in human specimens a new micro-organism, designated by them *Spirochaeta icterohemorrhagiae,* and since demonstrated without question to be the etiologic agent in Weil's disease.[1] On account of certain distinctive features of the infective organism, Noguchi[2] of the Rockefeller Institute for Medical Research has regarded it as a new genus for which he has suggested the name *Leptospira.* These spirochetes have since been examined in many parts of the world; and there is now no reason to assume that the Japanese, Belgian and American strains are other than identical.

Noguchi has found that rats captured in New York City and vicinity harbored the spirochete in question. He believes that the finding of the causative organism of infectious jaundice among wild rats in this country and the identification of this strain with the strains found on other continents is particularly important in that it reveals a latent danger to which we are constantly exposed. But New York is not the only community liable to be invaded by these neighborhood enemies. . Spirochetes capable of conveying hemorrhagic jaundice to guinea-pigs have been reported from Nashville[3] and from Washington.[4] According to a report just issued from the John McCormick Institute for Infectious Disease, Chicago rats are by no means free from the infectious organisms.[5] Spirochetes resembling those described as the cause of acute infectious jaundice were demonstrated in occasional animals —two out of thirty rats examined—indicating that they are probably not present in a high percentage of the rodents. Nevertheless, the spirochetes have been found, and this fact of itself constitutes a latent danger. They were demonstrated in material from the mouth and in tissue from the kidney. It is suggested by Otteraaen that, because of the presence of spirochetes in the mouths of rats, it is possible that, at the time of the bite, organisms may be carried into the wound by the saliva or teeth, and disease may in this manner be transferred directly from the rat to man.

The apparent immunity of rats to any noxious effect from the pathogenic organisms which they thus harbor is surprising. In some places more than one fourth of the rodents caught and examined have been found infected with the spirochetes, so that we must assume that a pronounced tolerance to them has been developed. If the present freedom of man from more widespread infection is to continue, suitable sanitary conditions in relation to this threatening factor in his environment must be maintained.

THE VICTORY MEETING

From every point of view the annual session of the Association held at Atlantic City last week must be considered a success. The attendance far exceeded the expectations of the most optimistic; the registration was 4,929, exceeding by nearly 1,000 the registration of the largest previous Atlantic City session, held in 1914; in fact, the registration this year has been exceeded only by that of the Chicago and New York sessions.

An unusual feature was the new arrangement for section meetings by which each section holds only one meeting a day. This plan was carried out by all of the sections except one, and the House of Delegates directed that the plan be continued.

The special VICTORY MEETINGS on Wednesday and Thursday evenings and the war sessions held Thursday afternoon, devoted to general medicine and surgery, were a novelty of this session. These meetings were well attended, the foreign guests and distinguished representatives of American organizations were enthusiastically received and the programs were instructive. Reports of these meetings appear in this and in the next number of THE JOURNAL.

The sessions of the House of Delegates were unusual especially because of the sociologic-medical aspects of the questions discussed. Narcotic addiction, social insurance, physical education, pharmaceutical interests, the publication of new journals, antivivisection legislation, daylight saving and the securing of permanent benefit from the medical work of the war—these were some of the subjects which engaged the attention of the House and on which definite recommendations were made or action taken. These are reported in the published minutes of the House of Delegates.

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[1] Inada, R.: Ido, Y.; Hoki, R.; Kaneko, R., and Ito, H.: J. Exper. M. **23**: 377 (March) 1916.

[2] Noguchi, H.: Spirochaeta Icterohaemorrhagiae in American Wild Rats and Its Relation to the Japanese and European Strains, J. Exper. M. **25**: 755 (May) 1917.

[3] Jobling, J. W., and Eggstein, A. A.: The Wild Rats of the Southern States as Carriers of Spirochaeta Icterohemorrhagiae, J. A. M. A. **69**: 1787 (Nov. 24) 1917.

[4] Neill, M. H.: The Problem of Acute Infectious Jaundice in the United States, Pub. Health Rep. **33**: 717 (May 10) 1918.

[5] Otteraaen, A.: The Spirochete of Infectious Jaundice (Spirocheta Icterohemorrhagiae, Inada; Leptospira, Noguchi) in House Rats in Chicago, J. Infect. Dis. **24**: 485 (May) 1919.

Among other attractions the scientific and commercial exhibits were exceptional both in the quantity and character of the material presented. In the scientific exhibit special notice should be given to the demonstrations by the Army and Navy Medical Departments and the Public Health Service of work both during the war and in preparation for peace. Connected with the scientific exhibit was a continuous motion picture performance in which were shown many new educational films.

Finally, it is not amiss to add here a note of thanks to the physicians of Atlantic City for their cooperation. Arranging for an annual session of the Association requiring numerous meeting places, large exhibit space and hotel accommodations for over 5,000 physicians and their guests is no small task. The aid given by an active local committee on arrangements is a determining factor in the success of the session.

METABOLISM IN PERNICIOUS ANEMIA

Pernicious anemia has assuredly not lacked investigation in recent years. The trend of the studies of this disease has been toward the more obvious abnormalities of the blood and the hemopoietic organs. There has been much searching for hemolytic compounds presumably elaborated in the disease processes and responsible for the great decrease in red blood cells. Many investigators have sought the cause of the anemia in some disorder of the gastro-enteric tract whereby harmful products of enterogenous origin are produced and absorbed. Indeed, from time to time, various chemical substances have actually been charged with responsibility for the uncontrollable hemolysis which brings about the untoward symptoms; but the proof for their etiologic rôle has in no case been firmly established.

Some of the pathochemical manifestations of pernicious anemia have recently been summarized by Kahn and Barsky,[1] who emphasize the familiar upset in the alimentary digestive functions. Helpful as such studies may be in the management of the diet and nutrition of patients, they fail to give anything like a complete picture of the metabolism in pernicious anemia. Most of the functions of the pancreas, liver and kidneys are reported as undamaged; and the hypothesis of the existence of "a state of suboxidation" as proposed by Kahn and Barsky hangs on extremely slender evidence. Far more striking are the calorimetric observations made by Meyer and Du Bois[2] on patients suffering from the disease. Their results show an increased metabolism in pernicious anemia, which was especially pronounced when the hemoglobin content of the blood fell to 20 per cent. of the normal. The explanation of this phenomenon observed with the Sage calorimeter has been problematic. Recent additional metabolic observations at the Peter Bent Brigham Hospital in Boston, by Tompkins, Brittingham and Drinker,[3] may furnish a key to the solution. They noted that before treatment the metabolism may be within normal limits or it may be above or below normal. After transfusion the metabolism always reaches a normal or diminished level. What is the interpretation of such changes? Transfusion produces a diminution of pulse rate and respiratory activity, and a drop in temperature if it has previously been elevated. But according to the Boston investigators the response of the metabolism to transfusion lags behind that of all the other factors by an interval of several days. The lowering of metabolism is, therefore, not due simply to a cessation of the compensatory muscular activity of the anemic individual. Tompkins, Brittingham and Drinker venture the opinion that in untreated acute cases it is evident that, outside of the heightened activity of the cardiac and other muscle, there is some type of stimulation to the body cells in general, and the amount of this stimulation is represented by the fall in metabolism after transfusion. There are coincident progressive tissue alterations which tend to reduce metabolism. These alterations are represented by the diminished metabolism of the chronic cases, and by the low level to which the metabolism falls in practically all cases as a result of transfusion.

On the basis of the foregoing hypothesis the lowered energy output of a chronic case of pernicious anemia represents the profound reduction in active tissue that is present in the terminal stages of the disease. In such conditions transfusion offers little promise of help. But in the earlier stages in which metabolism still remains at a normal level when the accelerated muscular efforts are excluded, some advantage may be expected. As the latest investigators[3] express it: While a course of transfusions does not prevent the development and progress of neurologic lesions, it does postpone the muscular sluggishness, which eventually reduces the chronic case of pernicious anemia to the state of a helpless burden. Relief always represents desirable therapy even if cure is seemingly impossible.

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[2] Meyer, A. L., and Du Bois, E. F.: The Basal Metabolism in Pernicious Anemia, Arch. Int. Med. **17**: 965 (June) 1916.

[3] Tompkins, Edna H.; Brittingham, H. H., and Drinker, C. K.: The Basal Metabolism in Anemia with Especial Reference to the Effect of Blood Transfusion on the Metabolism in Pernicious Anemia, Arch. Int. Med. **23**: 441 (April) 1919.

The Nursing Problem.—On the one hand, if artificial barriers are hindering women who could and would give good service at the bedside of the sick from rendering that service, those barriers must come down. Any standards of educational requirements and training maintained solely for the purpose of making the nursing field a closed preserve must give way before the public need. On the other hand, we may as well concede the annoying and deplorable fact that attempts to exact of nurses a degree of altruism and abnegation which are not expected of or practiced by any one else have slight chance of success.—*Modern Hospital.*

Current Comment

THE PRESIDENT-ELECT, SURGEON-GENERAL WILLIAM C. BRAISTED

The election of Dr. William C. Braisted, Surgeon-General of the Medical Department of the Navy, as President of the American Medical Association was particularly appropriate to the Victory Meeting. Thus the Association not only honors the man it elects but is itself honored. Dr. Braisted's career represents a steady progress through many delicate tasks and difficult assignments. He was born in Toledo, Ohio, in 1864, and was graduated by the University of Michigan in 1883, and by the medical department of Columbia University in 1886. He served as intern in Bellevue Hospital, New York, for two and one-half years, entering civilian practice in Detroit in 1888 and continuing until 1890, when he entered the Navy as assistant surgeon. He was promoted in 1893 to passed assistant surgeon, then to surgeon, and in 1913 to medical inspector. In the routine of a naval career he has served on a number of vessels and at many naval hospitals, and twice has been instructor in surgery in the naval medical school. In 1904 he fitted out and equipped the hospital ship *Relief*. During the Russo-Japanese War he went to Japan as the representative of the Medical Department of the United States Navy, and his report on this assignment was considered by the Japanese officials to be the most accurate and complete published. Surgeon-General Rixey appointed him assistant chief of the Bureau of Medicine and Surgery; he continued in this service for six years, from 1906 to 1912, serving also under Surgeon-General Stokes. During 1906 and 1907 he was attending physician at the White House. He acted as fleet surgeon of the Atlantic Fleet from 1912 to 1914, when he became Surgeon-General of the Navy with the rank of rear admiral. He has been decorated twice by foreign governments—first by the emperor of Japan and later by the president of Venezuela. Admiral Braisted is especially noted for the interest he has taken in preventive medicine. He has given particular attention to the control of venereal diseases. Under his administration the Department of Medicine of the Navy has made a most enviable record, as indicated by the remarkably low mortality and morbidity records of the men in the naval service. The election of Admiral Braisted at this time is especially fitting: it recognizes the service without whose aid the winning of the war would not have been possible.

Rear-Admiral William C. Braisted
Surgeon-General, U. S. Navy
President-Elect of the American Medical Association

MALNUTRITION CLINICS AND STUDENTS OF DIETETICS

Not long ago reference was made in The Journal to what may be accomplished in the case of malnourished or delicate children by the class method of dietetic and hygienic treatment described by Emerson[1] in 1910 and more recently by Smith.[2] The procedure is similar in many ways to that pursued in the classes for the tuberculous, and it aims at personal education and realimentation with the cooperation of both the patient and his family. There can be little question today that the problem of bringing many underweight children up to normal is largely one of diet. At the University of Chicago the needs of underweight children selected after competent medical examination from cases at the Central Free Dispensary of Rush Medical College were made the subject of attention of advanced students in academic courses in applied dietetics. According to Lydia Roberts,[3] who supervised the work, the children were all given thorough examination and all necessary medical treatment by the physicians, who then referred those in need of dietary help to the diet specialists, exactly as eye and ear cases were turned over to their respective clinics. Children in need of medical supervision reported to the physician each week before coming to the diet class; others with nothing at fault but diet and hygiene came directly to the class. The children met once a week on Saturday mornings. At the clinic the student took special charge of her own cases, listened to the discussion of the others, and helped prepare food exhibits, diet slips, and recipes needed in the class. She made at least one home visit each week, saw that the child attended the clinic regularly, and was held personally responsible if he lost or failed to gain. The results from such beginnings in an enterprise beneficial alike to patient and to student are reported to be gratifying. Parents have been educated, poor hygiene has been corrected, home living conditions have been improved, and, above all, gains of weight have been induced. Food, particularly milk, sleep, and better dietary habits, have contributed most to the favorable outcome. This success, though representing only the beginnings of what may become a large sociological and hygienic enterprise, furnishes an added illustration of the mutual advantage of contact between a student and a patient in the modern scheme of clinical instruction.

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[1] Emerson, W. R. P.: Class Method in Dietetic and Hygienic Treatment of Delicate Children, Pediatrics **22**: 627, 1910.

[2] Smith, C. H.: Methods of Conducting a Class for Malnourished Children, Am. J. Dis. Child **15**: 373 (June) 1918. Medical Help in the Undernutrition of Childhood—What Next? editorial, J. A. M. A. **71**: 974 (Sept. 21) 1918. Emerson, W. R. P.: A Nutrition Clinic in a Public School, Am. J. Dis. Child. **17**: 251 (April) 1919.

[3] Roberts, Lydia: A Malnutrition Clinic as a University Problem in Applied Dietaries, J. Home Econom. **11**: 95, 1919.

FAT ABSORPTION IN INFANCY

The consideration of the quantity of "fat," in the form of either neutral fat, fatty acid or soap, in the stools of infants takes a prominent part in the clinic of diseases of childhood. There have been periods within the past few decades when the question of the digestion and absorption of fats in the alimentation of infancy has almost seemed, to those not solely concerned with problems of this sort, to receive an emphasis out of all proportion to its comparative significance. The starting point for the estimate of good, tolerable or deficient utilization of fats and the diagnosis of any disorders consequent on a disturbance of this function lies in a knowledge of what constitutes the normal condition in health. In the case of the adult, the statistics on this point are concordant and conclusive for a considerable number of fats of both animal and vegetable origin. Ninety-five per cent. or more of ingested fat ordinarily is absorbed, so that even when it is consumed in amounts above 100 gm. (3⅓ ounces) the utilization of fat may be regarded as excellent in the healthy person. These established findings are now supplemented by new statistics from breast fed infants in this country. Analyses made by Holt, Courtney and Fales[1] of New York on the feces of thirty well nourished infants who were gaining normally shows a range of fat absorption of from 90 to 99 per cent. of the intake. The fat of the stools averaged 34.5 per cent. of the dried weight, and frequently was as high as 50 per cent. About one third was in the form of soaps. In absolute amounts, the daily fecal excretion of fatty material rarely exceeded 2 gm., and was sometimes less than 0.5 gm. Here, then, is another illustration of the danger of thinking in terms of percentage composition when small quantities are involved. A stool may be half fat, and yet that half may amount to only a gram or two in absolute quantity, when little alimentary residue appears as feces. According to the New York investigators, no constant relation was shown between the percentage of fat in the mother's milk and the percentage of total fat in the stool.

SHOCK AND FAT EMBOLISM

Among the numerous theories to account for the production of shock as observed at the front during war time the hypothesis that it is due to fat embolism has been frequently mentioned. Porter, who visited the battlefields of France to study shock, has strongly championed the explanation cited. In his essay on "Shock at the Front"[1] he wrote:

> I have myself examined more than a thousand wounded. Save a few wounds of the abdomen, in which the blood vessels or their nerves in that great vascular region were probably directly injured, there has been no case of shock except after shell-fractures of the thigh and after multiple wounds through the subcutaneous fat. In these, closure of the capillaries by fat-globules is known to take place. This is strong support for my discovery that shock may be produced in animals by injecting fat into the veins.

Numerous investigators, however, have taken exception to this seemingly simple explanation of how shock originates. For instance, the investigation of what actually happens to animals subjected to severe concussion of the sort that provokes "explosive shock" has included a study of the possible presence of fat in the blood vessels. Intravascular fat in the form of droplets of widely varying sizes has been commonly found. Unfortunately for the embolism hypothesis, intravascular fat has been found in the same localities in normal animals of the same species. McKibben,[2] at the Army Neurosurgical Laboratory at the Johns Hopkins Medical School, demonstrated the presence of fat in the blood vessels of all the animals examined, no matter whether they had been shocked by air concussion or not. No quantitative or qualitative differences have been detected between the fat found in the vessels of the shocked animals and the intravascular fat of normal ones. The same is true with respect to the intravascular fat found in prolonged anesthesia. Any hypothesis of shock by fat embolism must take cognizance of these facts.

ANDREAS CAESALPINUS

The present year marks the four-hundredth anniversary of the birth of Caesalpinus, the botanist and writer on medical topics, to whom, along with Servetus, Realdus, Columbus and others, the discovery of some of the fundamental principles of the circulation of the blood has been ascribed in days gone by. It has been remarked that all great men have their detractors. Harvey, the real discoverer of the circulation of the blood, has been no exception to this statement. Nevertheless, his fame rests so securely in our day, and the immense significance of the method of study which he employed in relation to the circulation is so generally admitted, that the alleged claims of others to priority need give us no concern. At most, the circuit of blood through the lungs had been only vaguely defined before Harvey published his epoch-making work. Caesalpinus was among those who entertained ideas about the movement of the blood. To his credit, it may be said that he was bold enough to shake off the domination of galenic theories. Caesalpinus seemingly grasped the possibilities of the pulmonary circulation. He "recognized that the flow of blood to the tissues took place by the arteries and by the arteries alone, and that the return of the blood from the tissues took place by the veins and not by the arteries." With Sir Michael Foster[1] we are inclined to believe, however, that the conclusions of Ceasalpinus were the result of controversial argument rather than of patient research, such as characterized Harvey's transcendent discoveries. There is no record of observations or experiments in the writings of Caesalpinus. We may therefore point to his failure to reach a real goal as an illustration of the incomparable superiority of the true scientific method. Even today, more than three centuries after the events recorded, the foremost reason why Caesalpinus failed whereas Harvey succeeded deserves to be brought home anew to those who tread the paths of the medical sciences.

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[1] Holt, L. E.; Courtney, A. M., and Fales, H. L.: A Study of the Fat Metabolism of Infants and Young Children, I, Fat in the Stools of Breast Fed Infants, Am. J. Dis. Child. **17**: 241 (April) 1919.

[1] Porter, W. T.: Shock at the Front, Boston, 1918.

[2] McKibben, P. S.: A Note on Intravascular Fat in Relation to the Experimental Study of Fat Embolism in "Shell Shock," Am. J. Physiol. **48**: 331, 1919.

Medical Mobilization and the War

Personnel of the Medical Department

For the week ending June 13, there were 13,931 officers in the Medical Corps, a decrease of 975 from the previous week. The Medical Reserve Corps contained 2,414 officers. The total number of medical officers discharged since the beginning of the war is 18,056.

Bulletin A. E. F., Final Number

(June 2, 1919)

Some interesting figures are presented as to pathologic studies made by the pathologists of the A. E. F. The records include 14,000 protocols made by 450 pathologists. Two hundred and sixty-eight of the pathologists have been graded as good or very good on the basis of their scientific and technical knowledge; 180 were classified as fair, and two as very poor. The record will be kept on file in Washington, and will be available for study.

STATISTICS ON TYPHOID AND PARATYPHOID

The complete figures on typhoid and paratyphoid fever in the A. E. F., including Italy and Russia, are published in this issue of the Bulletin. The tabulation follows:

	Typhoid		Paratyphoid	
	Cases	Deaths	Cases	Deaths
1917*—				
August	..	..	..	.. ..
September	..	..	..	.. ..
October	..	..	..	.. ..
November	2	..	..	.. ..
December	..	1	6	.. ..
1918—				
January	2	1	1	.. ..
February	..	2	..	.. ..
March	..	..	1	.. ..
April	4	2	..	.. ..
May	1	..	..	.. ..
June	8	..	1	.. ..
July	109	2	1	.. ..
August	45	10	5	.. ..
September	59	12	16	1a 2b
October	43	7	8	.. ..
November	70	12	16	1b
December	161	25	28	.. ..
1919—				
January	232	33	33	.. ..
February	169	9	9	.. ..
March	212	35	35	.. ..
April	92	4	7	.. ..
May	39	..	3	.. ..
Totals	1,248	155	170	3

* No cases or deaths reported in July, 1917.

MONTHLY REVIEW

The onset of fair weather in April, continuing throughout May, has caused a reduction in all communicable diseases.

Appropriation for Medical Department, U. S. Army

The sum of $5,000,000 is authorized to be expended for supplies for the medical and hospital department of the United States Army during the fiscal year beginning July 1, 1919, in the Army appropriation bill now under consideration by Congress. This appropriation includes many specific items necessary to the operation of the Surgeon-General's department. The Surgeon-General is authorized to spend an additional $20,000 for the purchase of books and periodicals for the library of the Medical Department and $10,000 is authorized for the purchase and preservation of specimens for the Army Medical Museum. The Surgeon-General is directed to expend $60,000 for the care of officers and enlisted men in hospitals in the Canal Zone. For paying nurses, $80,000 is authorized; for contract surgeons, $90,000; for reserve veterinarians, $350,000; for hospital matrons, $3,600.

HONORABLE DISCHARGES, MEDICAL CORPS, U. S. ARMY

Note.—In the following list, L. signifies lieutenant; C. captain; M., major; L. C., lieutenant-colonel, and Col., colonel.

ALABAMA

Belle Mina—Pettus, J. J. (C.)
Bessemer—Conwell, H. E. (C.)
    Hays, J. H. (L.)
Birmingham—Lotterhos, G. (L.)
    Lowrey, J. M. (C.)
    Watkins, M. A. (M.)
Chunchula—Reed, J. M. (C.)
Cullman—McAdory, E. D. (L.)
Horton—Waddell, H. G. (L.)
Marion Junction—Donald P. Y. (L.)
Samson—Lewis, B. J. (L.)
Spring Hill—Ross, C. H. (M.)
Talladega—Warwick, B. B. (L.)
Ward—Allen, W. E. (L.)

ARIZONA

Morenci—Jay, C. (M.)
Phoenix—Bryant, J. H. (L.)
St. John—Bouldin, T. J. (L.)

ARKANSAS

Gentry—Steele, R. W. (L.)
Little Rock—Ogden, M. D. (M.)

CALIFORNIA

Alameda—Hamilton, J. K., Jr. (C.)
Berkeley—Force, J. N. (C.)
Eureka—Chain, J. N. (C.)
Fresno—Pettis, J. H. (C.)
Guadalupe—Franklin, J. H. (C.)
Los Angeles—Dodge, W. (L.)
    Fairchild, F. D. (M.)
    Lupton, E. L. (C.)
    Rothwell, W. T. (L.)
    Shea, D. E. (L.)
    Swartz, B. A. (L.)
    Tholen, E. F. (C.)
Monrovia—Remington, L. D. (M.)
Oakland—Ball, J. D. (C.)
    Powell, A. (M.)
Pasadena—Newcomb, A. T. (C.)
    Roberts, W. H. (M.)
Richmond—Smallwood, W. C. (L.)
San Diego—Banks, A. E. (M.)
    Proudfoot, C. P. (C.)
San Francisco—McKenney, A. C. (M.)
    Levison, C. G. (Col.)
    Wilcox, G. B. (L.)
Stockton—McLeish, A. H. (C.)
    Six, C. L. (C.)
Taft—Galehouse, F. C. (C.)
Watsonville—Wayland, C. (L.)
Whittier, B. F. (C.)
Willits—Babcock, R. A. (C.)

COLORADO

Cedaredge—Bolton, L. C. (M.)
Del Norte—Miller, H. C. (M.)
Denver—Finney, H. S. (M.)
    McEachern, C. G. (C.)
    Philpott, J. A. (L.)
    Van Gilder, D. W. (C.)
Fort Collins—Atkinson, C. (M.)
Pueblo—Low, H. T. (C.)
    Snedec, J. F. (C.)
    Work, P. (M.)

CONNECTICUT

Hamden—Lay, W. S. (M.)
Hartford—Rooney, J. F. (C.)
    Wilson, J. C. (C.)
Middletown—O'Brien, F. J. (L.)
Norwich—Callahan, J. W. (L.)
Southington—Miller, W. R. (C.)
Terryville—Lawton, R. J. (L.)
Wallingford—McGaughey, J. D. (M.)
Waterbury—Moriarty, J. L. (M.)

DISTRICT OF COLUMBIA

Washington—Hasbrouck, E. M. (C.)
    Marks, W. G. (L.)
    Price, H. M. (C.)

FLORIDA

Jacksonville—Black, J. B. (C.)
McIntosh—Walkup, A. C. (C.)
Pensacola—Anderson, W. E. (C.)
Tampa—Paniello, S. (L.)
Tavares—Colley, S. C. (L.)

GEORGIA

Atlanta—Boland, F. K. (L. C.)
    Garner, J. R. (C.)
    Young, L. T. (L.)
Camilla—Turner, J. C. (L.)
Chipley—Parham, L. G. (L.)
Gainesville—Rudolph, H. L. (C.)
Hephzibah—Corley, R. E. (C.)
Macon—Stovall, R. H. (L.)
Milledgeville—Allen, E. W. (C.)
Omega—Webb, M. L. (C.)
Statesboro—Floyd, F. F. (C.)
    Kennedy, H. B. (C.)
Sylvania—Cail, J. C. (C.)
Thomson—Bartlett, C. L. (L.)
Tifton—Scarboro, E. R. (C.)
Waycross—Minchew, B. H. (L.)
Winder—Mathews, W. L. (C.)
Zirkle—Kirkland, S. A. (L.)

IDAHO

Coeur D'Alene—Dwyer, J. C. (C.)

ILLINOIS

Beardstown—Charles, T. G. (L.)
Belleville—Meng, W. L. (C.)
Chicago—Andreson, L. H. (L.)
    Baker, H. L. (C.)
    Berg, E. P. (L.)
    Chamness, E. R. (C.)
    Champlin, H. G. (L.)
    Dagg, T. L. (C.)
    DeVry, J. W. (L.)
    Eaton, R. C. (C.)
    Fainer, E. M. (L.)
    Fisk, W. B. (C.)
    Fordyce, A. W. (L.)
    Golden, S. S. (L.)
    Harry, J. R. (C.)
    Jackson, H. (C.)
    Johannes, E. W. (C.)
    LeBeau, A. A. (L.)
    Markson, M. R. (L.)
    Miller, T. E. (C.)
    Rabbins, M. J. (L.)
    Rollins, F. T. (L.)
    Salk, R. S. (C.)
    Seidner, M. P. (L.)
    Sights, W. P. (M.)
    Smith, F. M. (L.)
    Steffens, J. (C.)
    Stutsman, W. H. (C.)
    Sweeney, J. S. (M.)
    Todd, D. D. (C.)
    Wolin, B. M. (L.)
Dixon—Owens, E. B. (M.)
Edwardsville—Barnsback, R. S. (C.)
Evanston—Homel, P. R. (C.)
    Huggins, B. H. (L.)
Freeport—Best, F. E. (L.)
Hindsboro—Hopkins, J. J. (C.)

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[1] Foster, Sir Michael: Lectures on the History of Physiology, Cambridge University Press, 1901.

Illiopolis—Willcockson, H. B. (L.)
Joliet—Myers, H. A. (C.)
La Grange—Hillmer, R. E. (L.)
Moline—Youtz, H. L. (C.)
Osceola—Roberts, P. F. (L.)
Pana—Miller, L. H. (L.)
Peoria—McReynolds, A. E. (C.)
Price, W. J. (L.)
Rock Island—Walsh, F. C. (C.)
Rockton—Zwaska, A. B. (L.)
Springfield—Bullard, R. I. (M.)
Evans, F. N. (C.)
Wood, J. T. (L.)

INDIANA

Anderson—Armington, J. C. (L.)
Aurora—Stewart, O. H. (C.)
Boswell—Hubbard, H. H. (M.)
Bryant—Smith, G. A. (C.)
Camden—Wray, B. F. (C.)
East Chicago—Townsley, F. L. (L.)
Elkhart—Bassler, C. R. (L.)
Elwood—Shewalter, G. M. (L.)
Evansville—Willis, J. H. (C.)
Fort Wayne—Berghoff, R. J. (C.)
Johnston, D. D. (C.)
Porter, M. F., Jr. (C.)
[illegible] l, P. R. (L.)
[illegible], J. C. (M.)
[illegible], F. J. (C.)
Koons, K. M. (L.)
Lochry, R. L. (C.)
Weyerbacher, A. F. (M.)
Jeffersonville—Cohen, D. (C.)
Michigan City—Bowers, J. W. (M.)
Noblesville—Thompson, H. H. (M.)
Plymouth—Knott, H. (M.)
Richmond—Misener, W. L. (C.)
Syracuse—Hoy, C. R. (C.)
Whiteland—Woodcock, C. E. (L.)

IOWA

Albia—Bone, M. (C.)
Belle Plaine—Newland, D. H. (L.)
Boone—Jones, M. C. (C.)
Whitaker, B. T. (L.)
Whitehill, N. M. (C.)
Clinton—Seiler, R. A. (C.)
Davenport—Foley, W. E. (L.)
Des Moines—Givens, M. A. (L.)
Van Meter, J. N. (L.)
Dolliver—Mereness, H. D. (C.)
Fairfield—Clarke, J. F. (L. C.)
Fort Dodge—Acher, A. E. (L.)
Fredericksburg—Reich, L. P. (C.)
Greenfield—Reynolds, E. O. (L.)
Manson—Herrick, T. B. (C.)
Moravia—Harris, W. (L.)
Mystic—Fenton, W. J. (L.)
Waverly—Lott, R. H. (C.)

KANSAS

Anthony—Hawk, B. F. (M.)
Council Grove—Simpson, M. B. (C.)
Emporia—Eckdall, F. A. (C.)
Frederick—Martin, M. C. (C.)
Fredonia—Duncan, E. C. (L.)
Harris—Wilson, H. R. (L.)
Independence—Hudiburg, W. S. (L.)
Kansas City—Lewis, L. C. (M.)
McCracken—Page, W. (L.)
Sterling—Knowles, H. P. (L.)
Topeka—Crabb, J. A. (M.)
Waverly—Boggs, F. C. (C.)
Winfield—Jones, H. H. (L.)

KENTUCKY

Cedarville—Rose, L. (C.)
Clay City—Irvin, R. A. (C.)
Dundee—Stewart, J. D. (L.)
Fount—Rowland, S. H. (L.)
Greenup—Smith, S. C. (M.)
Greenville—Wilson, C. (M.)
Jackson—Bach, L. (L.)
Louisville—Bruner, W. T. (C.)
Crunwald, F. (C.)
Lindenberger, I. (M.)
Lutz, J. S. (C.)
Mount Sterling—Bush, D. H. (L.)
Oakland—White, A. W. (L.)
Versailles—Blackburn, S. A. (C.)
Winchester—Bush, W. A. (C.)

LOUISIANA

Alexandria—Peters, J. I. (L.)
Baton Rouge—McHugh, T. J. (C.)
Elm Grove—Crow, H. L. (L.)
Heflin—Middleton, E. B. (L.)
New Orleans—Naef, E. F. (L.)
Robin, L. J. (L.)
Rosenthal, J. W. (L.)
Tucker, I. N. (C.)

MAINE

Foxcroft—Hall, C. C. (L.)
Harrington—Burritt, G. L. (L.)
Portland—Burrage, T. J. (L. C.)
Sanford—Cobb, S. A., Jr. (L.)
Waterville—Towne, J. G. (L. C.)

MARYLAND

Anderson—Kimble, F. A. (L.)
Baltimore—Baggott, B. T. (C.)
Burket, W. C. (C.)
Burton, C. H. (L.)
Howard, L. H. (C.)
Hundley, J. M. (L.)
Kritzer, H. R. (L.)
Owensby, N. M. (M.)
Parker, L. M. C. (C.)
Salan, J. (L.)
Speed, J. S. (L.)
Wood, A. H. (L.)
Worrell, C. F. (L.)
Columbus—Roope, A. P. (L. C.)
Cumberland—Wilson, F. M. (C.)
Eckhart Mines—Wilson, G. H. (C.)
Frederick—Crist, G. B. (C.)
Thomas, B. O. (C.)
Jamestown—Bennett, E. M. (L.)
Jarboesville—Crane, J. D. (C.)
Takoma Park—Adams, J. L. (C.)

MASSACHUSETTS

Bluefield—Vass, T. E. (L.)
Boston—Abbe, F. R. (C.)
Adams, D. S. (L.)
Bailey, K. R. (M.)
Brigham, F. G. (C.)
Hamilton, B. E. (C.)
Hubbard, J. C. (L. C.)
Jones, D. F. (L. C.)
Perkins, H. C. (C.)
Ruggles, E. P. (L.)
Schwartz, G. H. (L.)
Sellards, A. W. (M.)
Stoddard, J. L. (M.)
Taylor, J. H. (L.)
Brockton—Cloudman, H. R. (C.)
Brookline—Harris, C. T. (L.)
Parris, R. O. (L.)
Chicopee—Cowett, M. P. (L.)
Greenfield—MacConnell, D. J. (L.)
Harwich—Miller, P. F. (C.)
Lexington—Tyler, W. M. (C.)
Lowell—Krasnye, J. F. (L.)
Lynn—Darling, A. E. (L.)
Mansfield—Lathan, B. M. (C.)
Newtonville—Howard, P. B. (M.)
Northampton—Perry, H. B. (L. C.)
Palmer—Murphy, J. M. (C.)
Quincy—Hardwick, S. C. (M.)
Southbridge—Tully, G. W. (L.)
Springfield—Streeter, J. F. (C.)
Sullivan, E. C. (C.)
Taunton—Fox, W. Y. (C.)

MICHIGAN

Ada—Breece, R. C. (C.)
Adrian—Lochner, G. M. (C.)
Ann Arbor—Eberbach, C. W. (C.)
Gordon, W. H. (C.)
Battle Creek—Haughey, W. (M.)
Bay City—Baird, F. S. (C.)
Baker, R. H. (L.)
Burr Oak—Kelley, J. J. (C.)
Detroit—Carmichael, E. K. (L.)
Dreyer, A. E. (L.)
Eisman, C. H. (C.)
Jennings, A. F. (M.)
Jones, M. M. (L.)
Klebba, P. A. (C.)
Kloeppel, C. S. (L.)
McMahon, H. O. (C.)
Pickard, O. W. (C.)
Dundee—Hildebrant, H. R. (L.)
Flint—Winchester, W. H. (M.)
Grand Rapids—Blackburn, H. M. (C.)
Gordon, T. D. (M.)
Manistee—MacMullen, H. (C.)
Ypsilanti—Whitmarsh, T. R. (C.)
Zeeland—Pyle, H. J. (L.)

MINNESOTA

Belgrade—Slocumb, H. H. (C.)
Cokato—Kvello, O. A. (L.)
Duluth—Barney, L. A. (L.)
Jackson—Portmann, U. V. (C.)
Jeffers—Richmond, C. D. (L.)
Le Sueur—McDougald, D. W. (C.)
Minneapolis—Gillespie, P. B. (L.)
Haynes, F. E. (L. C.)
Moir, W. W. (L.)
Soper, J. E. (C.)
Willson, H. S. (M.)
Riverton—Stocking, F. F. (C.)
St. Paul—Cole, W. (M.)
Knapp, F. N. (L.)
Sherper, M. (L.)
Williams, C. K. (C.)
Underwood—Lee, W. A. (L.)
Villard—Girvin, R. B. (C.)
Worthington—Manson, F. M. (C.)

MISSISSIPPI

Aberdeen—Acker, J. M., Jr. (M.)
Booneville—Riley, F. G. (C.)
Brookhaven—Johnson, J. H. (M.)
Cockrum—Moore, D. R. (C.)
Gloster—Cuming, H. T. (L.)
Greenville—Gamble, P. G. (C.)
Hickory—Plummer, J. R. (M.)
Jackson—Rodgers, W. A. (L.)
Logtown—Segura, J. O. (C.)
Meridian—Mosby, C. P. (C.)
Muldon—Dunlap, J. E. (L.)

MISSOURI

Bloomfield—Ashley, H. V. (L.)
Cuba—Martyn, J. H. (L.)
Farmington—Long, F. L. (C.)
Hardin—Elkins, H. A. (L.)
Jamestown—McRaven, C. P. (C.)
Kansas City—Feige, C. A. (L.)
Hallberg, J. W. (L.)
Kimberlin, J. W. (C.)
Raab, F. H. (C.)
Roberts, J. L. (C.)
Slusher, E. W. (M.)
Wilson, C. E. (M.)
Lexington—Ryland, C. T. (L.)
Licking—Rondoll, L. C. (C.)
Ozark—Young, J. H. (L.)
Sedalia—Grove, G. W. (C.)
Springfield—Gifford, A. W. (C.)
St. Joseph—Greenberg, C. (C.)
St. Louis—Gilbert, A. A. (C.)
Gorham, F. D. (C.)
Hamilton, C. O. (C.)
Kempff, L. A. (C.)
Klippel, B. W. (L.)
Mook, W. H. (L. C.)
Murphy, A. J. (L.)
Tarleton, F. S. (L.)
Taylor, H. I. (C.)
Tierney, J. L. (C.)
Vaughan, J. R. (C.)
Williams, R. S. (C.)
Trenton—Belshe, G. W. (M.)
Warsaw—Logan, J. A. (C.)

MONTANA

Choteau—Bateman, H. W. (C.)
Ekalaka—Baker, G. A. (C.)
Great Falls—Larson, E. M. (M.)
Woods, D. K. (C.)
Outlook—Mangan, L. A. (C.)
Ronan—Rosner, A. K. (L.)
Sykeston—Swarthout, E. F. (L.)

NEBRASKA

Atkinson—McKee, N. P. (L.)
Beatrice—Buckley, F. W. (L.)
Butte—Beatty, J. R. (C.)
Callaway—Bryson, R. D. (C.)
Columbus—Evans, J. N. (L.)
Neumarker, W. R. (L. C.)
Exeter—Wegener, K. E. F. (C.)
Hickman—Strough, G. W. (M.)
Lexington—Olsson, J. E. (C.)
Lincoln—Mayhew, J. M. (M.)
North Platte—Selby, C. A. (C.)
Simms, J. S. (L.)
Odell—Thoms, A. N. (L.)
Omaha—Erman, J. M. (L.)
Van Fleet, E. A. (C.)
Wahoo—Weber, E. O. (C.)
Wisner—Riley, W. K. (C.)

NEVADA

Reno—Cunningham, B. F. (M.)

NEW HAMPSHIRE

Gilsum—Williams, H. G. (C.)
Meredith—Borland, A. (L.)

NEW JERSEY

Asbury Park—Wagner, E. C. (C.)
Bridgeton—Sewall, M. F. (M.)
Haddon Heights—Tyler, E. A. (L.)
Hoboken—Reingold, A. (L.)
Jersey City—Chapman, E. J. (L.)
Connolly, T. W. (L.)
Forman, H. S. (C.)
Markowitz, I. (L.)
Long Branch—Wise, L. D. (C.)
Montclair—Seidler, V. B. (C.)
Morristown—Leggett, N. B. (M.)
Newark—Bissell, A. H. (C.)
Horsford, F. C. (C.)
O'Crowley, C. R. (C.)
Walhauser, H. A. (L.)
Paterson—Hagen, O. R. (M.)
Princeton—TenBroeck, C. (L.)
Somerville—Hegeman, R. F. (C.)

NEW MEXICO

Captain—Price, E. C. (L.)
East Las Vegas—Losey, C. S. (C.)
Las Cruces—Lane, B. E. (C.)
Van Huten—Hubbard, L. A. (L.)

NEW YORK

Albany—Bendell, J. L. (C.)
Stapleton, E. A. (C.)
Bronxville—Charlton, H. R. (C.)
Brooklyn—Dooling, J. F. (C.)
Epstein, I. (L.)
Feldman, H. (L.)
Gordon, O. A., Jr. (C.)
Hagan, C. E. (C.)
Heacock, C. H. (C.)
Johnson, J. L. (C.)
Shutter, H. W. (L.)
Buffalo—Betts, J. B. (M.)
DeCeu, R. E. (M.)
DeNiord, R. N. (C.)
Donovan, T. F. (C.)
Gartner, A. A. (C.)
Koenig, E. C. (C.)
McKenney, D. C. (M.)
Moscato, V. C. (L.)
Southall, E. A. (M.)
Canajoharie—Wheelock, W. E. (L.)
Canastota—Holden, E. C. (L.)
Cobleskill—Beard, J. J. (C.)
Cohoes—Hebert, R. A. (C.)
Delanson—MacDonald, W. F. (L.)
Derby—Brodie, A. K. (C.)
Dexter—Fowler, C. T. (L.)
Dover Plains—Appel, S. E. (L.)
Elmira—Gregory, R. O. (L.)
Freeport—Flanagan, J. T. (M.)
Hastings-on-Hudson—Lyman, F. R. (M.)
Hempstead—Sherman, H. D. (L.)
Hornell—Tracy, W. J. (C.)
Irondequoit—Walker, A. (C.)
Johnstown—Nolan, M. E. (L.)
Larchmont—Smith, E. J. (M.)
Long Island City—Boettiger, C. (M.)
Mencken, H. P. (C.)
Lowville—Culver, C. W. (L.)
New Brighton—Thomas, A. H. (M.)
New Rochelle—Burwell, E. L. (C.)
New York—Allan, J. S. (L.)
Aquaro, J. (C.)
Arluck, S. S. (L.)
Brothers, J. H. (C.)
Buchanan, T. D. (C.)
Burnham, A. C. (L. C.)
D'Alton, C. J. (C.)
Dixon, H. C. (C.)
Downes, W. A. (M.)
DuBois, F. E. (L.)
Edmonds, W. M. (C.)
Everingham, S. (M.)
Felsen, J. (C.)
Goldstone, J. (L.)
Goodhart, A. M. (L.)
Graboff, F. (L.)
Hamaker, C. T. (C.)
Hermann, B. (C.)
Howland, C. F. (C.)
Johns, L. J. (C.)
Kahn, L. M. (L. C.)
Kellogg, W. A. (C.)
LaRotonda, O. N. (C.)
Lawson, J. H. (M.)
Manning, G. R. (L. C.)
Martin, A. H. (C.)
Mayeroff, J. (L.)
Miles, S. H. (C.)
Rashbaum, M. (L.)
Reymond, R. P. (L.)
Roos, L. L. (C.)
Schwenk, A. C. (L.)
Stout, A. P. (L.)
Turner, P. L. (L.)
Valentine, J. J.(M.)
Van Kleech, E. (L.)
Wright, A. M. (L. C.)
Zulauf, G. W. (C.)
Owego—Capron, A. J. (C.)
Patchogue—Culkin, J. R. (M.)
Richland—Dunbar, A. G. (C.)
Rochester—French, E. A. (C.)
Garlick, F. J. (C.)
Marks, H. E. (L.)
Seymour, F. W. (C.)
Salamanca—Lawler, C. A. (C.)
Saratoga Springs—Vines, E. H. (M.)
Schenectady—Garlock, P. E. (C.)
Gulick, J. D. (C.)
Syracuse—Smith, G. K. (L.)
Tonawanda—Thompson, A. W. (C.)
Wappinger Falls—Blythe, R. P. (C.)
Watertown—Gardner, M. M. (C.)

Westbury—Silliman, G. S. (C.)
White Plains—Mott, W. W. (M.)
Whitestone—Adams, R. A. (L.)
Yonkers—Bell, S. D. (L.)
Flynn, J. J. (L.)
Vogeler, W. J. (M.)

NORTH CAROLINA

Albemarle—Magruder, L. F. (C.)
Charlotte—Rhyne, S. A. (L.)
Merry Hill—Willis, H. C. (C.)
Roanoke Rapids—Patchin, D. F. (L.)
Roxboro—Thaxton, B. A. (L.)
Winston-Salem—Lawrence, C. S. (L. C.)

NORTH DAKOTA

Cogswell—Saylor, H. L. (C.)
Mott—Redman, F. E. (M.)
Rucker, F. T. (C.)
Northwood—Callerstrom, G. W. (C.)
Westby—Norris, J. L. (C.)

OHIO

Akron—Amos, R. E. (L.)
Alliance—Barnard, B. C. (M.)
Ashtabula—Wynkorf, R. B. (C.)
Burkettsville—Sullivan, C. P. (L.)
Chillicothe—Perrin, D. A. (L.)
Cincinnati—Hauser, S. F. (L.)
Savage, W. E. (C.)
Schlemmer, E. W. (L.)
Schriner, L. H. (L.)
Shearer, C. C. (L.)
Smith, P. G. (L.)
Cleveland—Andrews, C. S. (L.)
Gill, W. C. (L. C.)
Grossman, A. B. (L.)
Jones, F. G. (L.)
Thompson, C. W. (C.)
Yoder, I. I. (C.)
Columbus—McCampbell, E. F. (L. C.)
Smith, A. N. (L.)
Fitchville—Bell, C. L. V. (L.)
Fostoria—Mowry, F. S. (C.)
Huron—Kuhl, A. F. (L.)
Kenton—Protzman, E. S. (C.)
Lancaster—Smith, R. H. (C.)
Linden Heights—Turner, J. A. (L.)
Marion—Rhu, H. S. (L.)
McClure—Boesel, I. H. (C.)
Mt. Vernon—Conard, C. D. (L.)
Newark—Mitchell, L. A. (L.)
Postle, H. H. (C.)
Seaman—Irwin, J. W. (L.)
Toledo—Booth, G. B. (C.)
Brown, T. H. (L.)
Shapire, W. M. (L.)
Washington C. H.—Baughn, H. A. (L.)
Youngstown—Turner, W. B. (M.)
Washburn, J. L. (M.)
Zanesville—Brush, E. R. (M.)

OKLAHOMA

Ada—Akers, G. A. (C.)
Chattanooga—Harned, W. B. (L.)
Collinsville—Callahan, H. W. (L.)
Drumright—Starr, O. W. (L.)
Durant—McKinney, H. W. B. (C.)
Lexington—Northcutt, C. E. (C.)
Mountain View—Bradley, C. E. (C.)
Oklahoma City—McLean, G. D. (C.)
Young, A. M. (C.)
Tulsa—Carleton, L. H. (L)
Woodward—Tedrowe, C. W. (C.)

OREGON

Eugene—Standard, S. C. (C.)
Hood River—Waugh, J. M. (M.)
La Grande—Bouvy, H. M. (C.)
Vehrs, G. R. (C.)
Oregon City—Mount, F. R. (L. C.)
Portland—Jones, M. J. (M.)
Moore, R. V. (C.)
Scott, W. G. (C.)
Strohm, J. G. (L. C.)

PENNSYLVANIA

Allentown—Blew, E. M. (L.)
Altoona—Alleman, G. E. (C.)
Snyder, J. R. T. (C.)
Beaver—Harrington, F. B. (L.)
Beaver Falls—Sterrett, W. J. (C.)
Bellefonte—Dale, D. (L. C.)
Braddock—Snowwhite, T. H. (C.)
Bristol—Wagner, J. F. (M.)
Butler—Stackpole, R. L. (C.)
Carlisle—Wagoner, P. U. (C.)
Chester—Arnold, C. H. (C.)
Gray, S. P. (C.)
Corapolis—Iland, E. M. (M.)
Donora—Koliski, J. J. (L.)
Dorranceton — Thompson, L. M. (M.)
Dunmore—Hazlett, A. C. (C.)
Erie—O'Donnell, J. J. (C.)
Freedom—Boal, G. F. (C.)
Galeton—Laye, H. A. (L.)
Greenville—Batteiger, F. O. (C.)
Harrisburg — MacMullen, J. W. (L.)
Hazleton—Buckley, R. E. (C.)
Imperial—Patterson, F. L. (C.)
Jefferson—Kerr, J. C. (C.)
Johnstown—Boyer, E. C. (L.)
Kingston—Shaafer, C. L. (M.)
Lancaster—Davis, H. B. (C.)
Stahr, C. P. (C.)
Lock Haven—Green, G. D. (M.)
Masontown—Messmore, J. L. (C.)
Mayfield—Martin, T. P. (C.)
McKeesport—Goldblatt, L. J. (L.)
Meadville—Poux, G. A. (L.)
Mechanicsburg — Spahr, R. R. (M.)
Media—Kenworthy, J. M. (C.)
Monessen—Hunter, W. D. (C.)
Monongahela—Linn, C. F. (C.)
Newville—McLaughlin, P. W. (C.)
Norristown—Miller, G. W. (M.)
Philadelphia—Abbott, A. C. (Col.)
Alexander, E. G. (M.)
Bachman, H. S. (L.)
Baines, M. C. (C.)
Baumann, F. D. (L.)
Bertolet, J. A. (C.)
Brady, C. P. (M.)
Broomall, H. S. (C.)
Brush, F. C. (L.)
Budin, D. (L.)
Engle, R. L. (C.)
Fenerty, V. J. (C.)
Ferguson, D. R. (C.)
Fish, H. C. (C.)
Fishback, H. R. (L.)
Goldsmith, N. R. (C.)
Jones, H. W. (L.)
Keenan, A. J. (C.)
Levy, F. D. (L.)
Lewis, C. J. (C.)
MacMurtrie, W. J. (C.)
McCarthy, C. T. (C.)
Musser, J. H., Jr. (M.)
Parrish, R. C. (L.)
Percival, M. F. (C.)
Randall, A. (M.)
Ross, T. C. (C.)
Siegel, A. E. (L.)
Skillern, S. R. (C.)
Steinmetz, C. G., Jr. (C.)
Pittsburgh—Adams, C. M. (C.)
Baumann, H. F. (C.)
Flood, H. C. (M.)
George, S. (C.)
Hibbs, R. C. (C.)
Lange, W. J. (C.)
Lasday, L. (L.)
Lauer, C. F. (C.)
McFarland, W. W. (L.)
Meredith, E. W. (M.)
Owens, J. R. (C.)
Wagner, A. A. (C.)
Walter, P. H. (C.)
Plymouth—Stiff, W. C. (M.)
Pottsville—McCarthy, M. J. (C.)
Moore, J. J. (M.)
Reading—Bell, T. H. E. (C.)
Rossiter—Preston, W. E. (L.)
Saltsburg—Kaiser, A. J. (L.)
Scranton—Goodfriend, H. (L.)
Kraemer, H. M. (L.)
Shamokin—Strickland, J. G. (L.)
Somerset—Shaffer, F. B. (C.)
South Bethlehem—Estes, W. L. (C.)
Sunbury—Thomas, C. M. (C.)
Swissvalle—Wagener, C. K. (C.)
Tamaqua—Fleming, A. B. (C.)
Temple—Bauscher, A. H. (C.)
Tower City—Hawk, D. J. (C.)
Tremont—Murphy, J. T. (C.)
Uniontown—McHugh, W. A. (C.)
Robinson, G. H. (C.)
Washington—Prowitt, H. P. (C.)
Sargent, L. D. (C.)
Wilkes-Barre—Bixby, E. W. (C.)
Wilkinsburg—Markell, W. O. (C.)
Williamsport—Pryor, C. A. (L.)

RHODE ISLAND

Auburn—Warren, C. F. (L.)
Providence—Burrows, E. A. (C.)
Corvese, A. (C.)

SOUTH CAROLINA

Anderson—Thompson, W. (L.)
Bamberg—Weekley, A. S. (L.)
Blacksburg—Little, A. L. (C.)
Chester—Moore, B. S. (C.)
Columbia—Fisburne, S. B. (C.)
Greenville—Wallace, J. M. (L.)
White, W. E. (L.)
Honea Path—Williams, J. W. (L.)
Lake City—Eaddy, J. D. (L.)
Summerville—Carroll, F. J. (C.)
Timmonsville—Foster, R. K. (C.)
Walterboro—Goodwin, C. I. (L.)

SOUTH DAKOTA

Deadwood—Ashcroft, F. E. (M.)
Lead—Fehliman, W. E. (C.)
Vermilion—Stansbury, E. M. (C.)

TENNESSEE

Bolivar—Miller, V. H. (M.)
Capleville—Latimer, R. G. (C.)
Cedar Hill—Barnes, M. W. (C.)
Centerville—Edwards, W. K. (C.)
Chattanooga—Barrett, S. H. (L.)
Hartsville—Blankenship, F. M. (L.)
Hillsboro—McCaleb, W. L. (L.)
Jackson—Arnold, B. C. (C.)
Knoxville — McCampbell, H. H. (C.)
Memphis—Brown, C. W. (L.)
Bry, M. E. (L.)
Chapman, L. H. (L.)
Murfreesboro — Lunsford, W. B. (L.)
Nashville—Erwin, A. L. (L.)
Woodring, T. V. (L.)
Oakland—Payne, C. (L.)

TEXAS

Amarillo—Gist, R. D. (C.)
Childress—Wolford, R. B. (C.)
Crowell—Clark, H. (M.)
Cuero—Trible, J. M. (C.)
El Paso—Carpenter, E. R. (C.)
Galveston—Smith, B. F. (C.)
Georgetown—Carter, D. W., Jr. (L.)
Hillsboro—Haggard, C. H. (C.)
Houston—Buchanan, C. C. (L.)
Myra—Roberts, A. L. (C.)
Palestine—Cockerham, L. H. (L.)
San Benito—Vinsant, W. J. (C.)
Santa Anna—Sealy, T. R. (C.)
Sulphur Springs—Pickett, H. W. (M.)
Terrell—Woolsey, H. U. (L.)
Tyler—Cain, W. R. (C.)

UTAH

Bingham Canyon — Bruckheimer, R. M. (L.)
Salt Lake City—Brain, C. E. (C.)
Whitlock, W. A. (C.)

VERMONT

Burlington—Jackson, H. N. (M.)
Middlebury—Ross, J. J. (C.)
St. Johnsbury — Tierney, J. P. (L.)
Sudbury—Colby, B. D. (L.)

VIRGINIA

City Point—Wyatt, H. L. (C.)
Columbia—Nelson, J. J. (C.)
Danville—Wiseman, H. A. (C.)
Lynchburg—Devine, J. W. (L.)
Norfolk—Anderson, J. W. (C.)
North Tazewell — Witten, J. W. (C.)
Portsmouth—Pendleton, W. (C.)
Richlands—Ratliff, J. M. (L.)
Richmond—Boiseau, J. G. (M.)
Hooker, R. C. (L.)
Roanoke—Wolff, C. O. (L.)

WASHINGTON

North Yakima — Helton, A. J. (M.)
Seattle—Beeler, G. W. (C.)
Thompson, H. B. (C.)
Tacoma—Hards, H. J. (L.)
Steagall, J. R. (C.)

WEST VIRGINIA

Harvey—Bolton, H. H., Jr. (L.)
Minnehaha Springs — Lockridge, R. B. (L.)
St. Marys—Grimm, H. W. (L.)

WISCONSIN

Ashland—Rohow, F. M. (L.)
Athens—Winnemann, W. J. (L.)
Beaver Dam—Webb, E. P. (C.)
Black River Falls—Thompson, R. D. (C.)
Cazenovia—Doctor, W. R. (C.)
Green Bay—Gosin, F. J. (C.)
Mueller, W. E. (C.)
Hartford—Buckley, W. E. (L.)
Hayward—Ballard, J. A. (C.)
Kenosha—Jorgensen, P. P. (C.)
Lancaster—Doolittle, S. W. (C.)
Madison—Cooksey, R. T. (L.)
Eyster, J. A. E. (M.)
Mendota—Lorenz, W. F. (M.)
Milwaukee—Campbell, R. M. (L.)
Farnham, C. R. (C.)
Frew, J. W. (L. C.)
Weber, A. J. (L.)
Oconto—Watkins, W. C. (M.)
Oshkosh—Combs, C. J. (M.)
Sparta—Scantleton, J. M. (C.)
Stanley—Erickson, H. C. (C.)
Washburn—Trowbridge, P. T. (C.)
Watertown—Abelman, T. C. H. (L.)
West Allis—Willett, T. (M.)

WYOMING

New Castle—Horton, F. L. (L.)
Powell—Lewellen, J. D. (L.)

ORDERS TO OFFICERS OF THE MEDICAL CORPS, U. S. ARMY

On account of lack of space, due to publication of proceedings of the Annual Session, "Orders to Medical Officers" are omitted in this issue.

Birth Statistics.—The U. S. Census Bureau's preliminary report for 1917 shows that in the birth registration area of the United States 1,353,792 infants were born alive in 1917, representing a birth rate of 24.6 per thousand of population. The total number of deaths in the same area was 776,222 or 14.1 per thousand. The births exceeded the deaths by 74.4 per cent. For every state in the registration area, for practically all the cities and for nearly all the counties, the births exceeded the deaths, in most cases by considerable proportions. The mortality rate for infants under 1 year of age averaged 93.8 per thousand living births. The birth rate for the entire birth registration area fell below that for 1916 by two-tenths of one per thousand population, but the death rate was less by six-tenths of one per thousand than in 1916. Thus the excess of the birth rate over the death rate for 1917, which amounted to 10.5 per thousand, was somewhat greater than the corresponding excess for 1916, 10.1 per thousand, although it fell slightly below that for 1915, 10.9 per thousand. If the birth and death rates prevailing in any one of these three years were to remain unchanged, and if no migration were to take place to or from the area to which they relate, its population would increase at the rate of slightly more than 1 per cent. per annum, or a little more than 10 per cent. in a decade. This would be about half the rate, 21 per cent., by which the entire population of the United States increased between 1900 and 1910.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ALASKA

Influenza Epidemic.—Influenza in most serious form is reported to be epidemic in Alaska. The Bristol Bay section is most seriously involved. The epidemic appears to be attacking both whites and natives with a high percentage of mortality. In one small settlement sixty deaths are said to have been reported in one day. The ships of the Pacific Squadron of the Navy, and the Coast Guard Service have been given hurried orders to proceed to Alaska with additional medical officers and hospital corps men.

CALIFORNIA

Personal.—Dr. Ray Lyman Wilbur, president of Leland Stanford University, has been elected president of the California State Conference of Social Agencies. President Wilbur has always taken particular interest in the sociological problems connected with diseases, and brings to his new duties a wide practical experience and a splendid record of past accomplishments.——Henry S. Kiersted, M. C., U. S. Army, Burlingame, was elected surgeon of the California Commandary Military Order of Foreign Wars of the United States at its meeting for organization at San Francisco, May 8.

DISTRICT OF COLUMBIA

Senate Committee on Public Health.—The membership of the full Senate Committee on Public Health and National Quarantine has been announced. The members are Senator Joseph I. France, Maryland, chairman; Senator Charles E. Townsend, Michigan; Senator Joseph S. Frelinghuysen, New Jersey; Senator Boies Penrose, Pennsylvania; Senator Warren G. Harding, Ohio; Senator L. Heisler Ball, Delaware; Senator Joseph E. Ransdell, Louisiana; Senator Duncan U. Fletcher, Florida; Senator Robert L. Owen, Oklahoma; Senator Oscar W. Underwood, Alabama; Senator William J. Harris, Georgia. The first six are Republicans and the last five Democrats. Strange as it may seem, the House of Representatives has no committee on public health, medical bills being referred to a number of committees, largely to military affairs and the judiciary committee. It is to be hoped that the medical profession will insist that a committee to act on medical legislation matters be named by the House at no far distant date.

ILLINOIS

Personal.—Dr. William M. Hanna, Aurora, has been elected medical director of the Grand Army of the Republic for Illinois.——Dr. Irving H. Neece, Palmyra, assistant surgeon, U. S. P. H. S., has been appointed health officer of Decatur.

Drugs at Great Lakes.—Joseph W. Robinson, said recently to have been an enlisted man at Great Lakes was arrested, June 14, while carrying a cigar box containing nearly $1,000 worth of cocain and opium. It is believed that the arrest of Robinson may be the link needed for solving the mystery in a number of "dope cases" which occurred at the U. S. Naval Training Station, in April.

Chicago

Personal.—Norman M. MacNeill, Capt., C. A. M. C., formerly resident physician at St. Joseph's Hospital, has been appointed adjutant of the Granville Canadian Hospital at Buxton, Derbyshire, England.——S. N. Trockey, Capt., M. C., U. S. Army, has returned after service with the British Forces in France.

Alumni Elect Officers.—At the annual meeting of the Northwestern University Medical Alumni Association held in Chicago, June 16, under the presidency of Samuel C. Stanton, Major, M. C., U. S. Army, the following officers were elected: president, Dr. William E. Quine, '69; secretary, Dr. Alexander A. Goldsmith, '01; and necrologist, Samuel C. Stanton, Major, M. C., U. S. Army, '92. On the mornings of June 16 and 17, instead of the usual clinic week, addresses were delivered to the Alumni at the school, by members of the faculty and alumni who had been in war service.

INDIANA

Tuberculosis Hospital Items.—New buildings are to be erected at Sunnyside, the Marion County Tuberculosis Hospital. There is to be a cottage for tuberculous children and a service building with kitchen, dining room and workshops. It is also hoped to erect soon a cottage for incipient cases with a capacity for twenty patients. The buildings will have all the latest improvements for the treatment of tuberculous patients. Dr. Harry S. Hatch, the superintendent, says that the needs are urgent for the better care of tuberculous children, as the work in checking tuberculosis is more effective among children than with the more advanced cases among adults.——The Indiana State Tuberculosis Hospital, Rockville, has been renamed the Indiana State Sanitarium. Dr. Amos Carter of Plainfield was chosen for superintendent, succeeding Dr. Raymond B. T. Sweany.

IOWA

Personal.—Dr. Harold L. Beye, assistant professor of surgery at the State University of Iowa, Iowa City, who has been on duty with the American Expeditionary Forces in France and who was gassed, has been released from the hospital and has returned home.——Dr. Alford J. Farnham, Traer, has been elected president, and Dr. Percy L. Parsons, Traer, secretary, of Tama County Medical Association.

New Health Laws.—A housing law has just been passed in Iowa. The law proposes minimum specifications for future building in cities of 15,000 population or over; also the reconstruction or rehabilitation of tenements or dwelling houses; the control of yard space, air space in living and sleeping quarters and other regulations tending toward the preservation of health of the people. This law is primarily a health measure which connotes economic and social welfare. Another law authorizes boards of supervisors, city and town councils, and boards of education to employ public health nurses. A venereal disease bill was passed and an appropriation of $15,000 made for the education of people on venereal diseases and their control. The government appropriates dollar for dollar, making an additional $15,000 for this work. The campaign against tuberculosis is admitted to have contributed no small influence to the passage of this legislation.

MARYLAND

Hospital Overcrowded.—Because of the abandonment of the hospitals for wounded soldiers at Cape May, N. J., and at St. Louis, whose patients are to be transferred to U. S. Army General Hospital No. 2, Fort McHenry, the capacity of that hospital will be taxed to its utmost, as there are already about 2,000 patients under treatment at the fort. About 1,000 men are expected from the two discarded hospitals.

Hospital Site Chosen.—A site adjacent to the Eudowood Sanatorium, Towson, has been selected for the new state tuberculosis sanatorium for negroes. The selection was made by the board of managers of the State Tuberculosis Sanatorium, Sabillasville. The last legislature appropriated a total of $75,000 for the sanatorium, of which $50,000 is available during the current fiscal year and $25,000 during the next. There will be about $50,000 left after the purchase of the land and this will be used to build first units of the hospital.

Personal.—Charles M. Remsen, Major, M. C., U. S. Army, Baltimore, who sailed for France last August and was connected with Evacuation Hospital No. 2 during the fighting in the Argonne region, has been promoted to the rank of lieutenant-colonel, and is now with the army of occupation at Coblenz.——Dr. William Kelso White, Baltimore, who for the past year has served overseas with the Medical Corps, U. S. Army, has returned and is now stationed at Camp Dix, N. J., awaiting discharge.——Dr. Henry A. Naylor, Pikesville, who served with the rank of captain in the Medical Corps, Sixtieth Pioneer Division, has received his discharge.

MASSACHUSETTS

Division of Public Health.—The Massachusetts State Department of Health announces the creation within the division of hygiene of a subdivision of public health nursing. Included in this subdivision will be the nurse health instructors of the division of hygiene.

Lawrence Establishes a Community Welfare Council.—May 14, the health and social agencies of Lawrence, united to form a community welfare council with the president of the chamber of commerce as chairman. The council intends to coordinate the work of the established organizations and to serve as a committee to develop the public health work of the city.

New England Child Welfare Conference.—At Boston, May 15 and 16, the New England Conference on Child Welfare was successful in bringing together from all the New England States about one thousand representatives of organizations devoted wholly or partly to children's work. This is one of the series of regional conferences on child welfare which have been arranged by Miss Julia Lathrop, Chief of the Federal Children's Bureau, to take place in different sections throughout the United States. The exchange of ideas and experience among English, Belgian, French, Japanese, Italian, Servian and American delegates is giving added strength to public opinion in favor of the efforts of child welfare organizations.

NEW YORK

Special Meeting on Narcotic Situation.—As a result of a petition of members of the Medical Society of the County of New York, a special meeting of the society has been called for June 23 to discuss the narcotic drug situation, especially with reference to the amendment to the sanitary code proposed by the commissioner of health.

Personal.—Charles S. Little, Capt., M. C., U. S. Army, superintendent of Letchworth Village, has returned from France, and on his discharge will resume his former position. ——Dr. Erick H. G. Restin, Liberty, has been appointed medical superintendent of Rockland County Tuberculosis Hospital.——Dr. Robert H. Irish, Troy, has been selected as head of the Tuberculosis Dispensary and the Visiting Nurse Service of Troy.

Victory Meeting of Buffalo Alumni.—The forty-fourth annual meeting of the Alumni Association of the Medical Department of the University of Buffalo was held in Buffalo, June 19 to 21, under the presidency of Dr. William F. Jacobs, Buffalo. The first day there was a symposium on war medicine and surgery by members of Base Hospital No. 23. In the evening class reunions were held. On the second day the alumni oration in medicine, on "Facts and Theory in Practice," was delivered by Dr. Frederick Peterson of New York City, and the fraternity reunions were held. On the third day of the meeting, the alumni victory dinner was given in the banquet hall of the Hotel Statler.

Narcotic Pledge by Bay Ridge Physicians.—At the regular meeting of the Bay Ridge Medical Society, June 5, a resolution was adopted whereby the members pledged themselves to try in every possible and reasonable way to cure addicts and alcoholic inebriates and pledged themselves not to prescribe drugs or alcoholic liquors merely for the purpose of satisfying a craving therefor. The establishment by the government of hospitals for the treatment of alcoholic and drug addicts was also recommended. The society approved a contribution of $5,000 toward the proposed Victory Memorial Hospital, Bay Ridge, which is to cost $100,000 and is to be erected as a tribute to the service men of Bay Ridge, living and dead, and the following officers were elected: Dr. Rollin Hills, president; Dr. Joseph W. Malone, vice president; Dr. James W. Fox, secretary, and Dr. John J. Masterson, treasurer.

New York City

Osteomyelitis Service.—A special service for the treatment of osteomyelitis is being conducted at U. S. Embarkation Hospital No. 4, 345 West Fiftieth Street, under the direction of Dr. Pedro Chutro, formerly director of the Hospital Buffon, Paris, and George W. Hawley, Lieut.-Col., M. C., U. S. Army. Lectures and demonstrations are given daily, except Saturdays, from 2 to 4; ward dressings daily from 9 to 11 a. m.; and operations are performed every Monday, Wednesday and Friday at 10 a. m.

OHIO

Venereal Disease Cases Reported.—Figures given out by the state health department, June 9, showed that the enforcement of the regulations requiring physicians to report to the department all cases of venereal disease in their practice are producing results. During the months of April and May, 1,693 venereal disease cases were reported, while during the corresponding period last year there were 626 reports of the disease.

Personal.—Fred Fletcher, Major, M. C., U. S. Army, Columbus, has been promoted to the rank of lieutenant-colonel, and is in charge of Base Hospital No. 38, at Nantes, France.——Dr. W. N. Unkeefer, Piqua, underwent an operation at the Memorial Hospital, June 3, and is reported to be doing well.——John D. O'Brien, Lieut.-Col., M. C., U. S. Army, Canton, chief of the medical services at LeMans, France, returned home, May 31.——Dr. Edward D. Allgaier, Cincinnati, has been appointed surgeon to the eye, ear, nose and throat service of St. Francis Hospital, succeeding Dr. John Ranly, deceased.

OREGON

Damages Against Physicians.—In a suit brought by Fred Barton against Drs. Ralph C. Matson and Ray W. Matson, Portland, in which $20,000 damages were asked on account of serious injury alleged to have resulted from leaving of a drainage tube in the lung, the plaintiff, May 28, is said to have been awarded $2,000 damages.

University of Oregon News.—The seventh annual meeting of the Alumni Association of the Medical Department of the University of Oregon will be held in Portland, June 23 to 25, immediately preceding the meeting of the Oregon State Medical Association, which is to be held June 26 to 28. From June 30 to July 10, the faculty of the university will give postgraduate courses for which a small fee will be charged.

PENNSYLVANIA

Personal.—Henry M. Thissell, Lieut., M. C., U. S. Army, Philadelphia, Pennsylvania Reserve Militia, has been relieved from active service and transferred to the supernumerary list.——Dr. Alphus W. Gregg, Kennett Square, was acquitted, June 4, of charges of improper medical treatment preferred by William and Anna Scott.

Philadelphia

Personal.—Surg.-Gen. L. Melis of the Belgian army, Prof. Jules Deusberg and Dr. Pierre Nolf, all of whom are from Liege, Belgium, were guests of the City Club at luncheon, June 7.

Medical Club Reception.—The Medical Club of Philadelphia gave a reception, on the evening of June 18, at the Bellevue-Stratford Hotel, in honor of Senator Robert L. Owen, Oklahoma, and the foreign delegates to the American Medical Association.

Hahnemann to Admit Women Students.—For the first time in seventy-one years women will be admitted to Hahnemann Medical College according to the announcements of Dr. Henry M. Eberhard, member of the faculty, and the admission of women to the institution will be made possible through the gift of $40,000 by W. E. Hering, whose father, Dr. Constantin Hering, was one of the founders of the college. This substantial fund was added to the Hering foundation funds and the interest on this additional endowment will be used for both men and women who could not otherwise afford a medical education. Living expenses as well as tuition will be provided by this fund.

TEXAS

Personal.—Dr. Dabney Berrey, San Antonio, has been appointed health officer of Bexar County.——Dr. Henry B. Decherd, Dallas, has been elected vice president of the University Club, Dallas.——Dr. Alden Coffey, Fort Worth, suffered severe bruises in an automobile collision, June 5.

North Texas Physicians Hold Meeting.—At the seventeenth semiannual meeting of the North Texas Medical Association held in Dallas, June 4, Fort Worth was selected as the next place of meeting and the following officers were reelected: president, Hugh Leslie Moore, Dallas, for the eighteenth term; vice president, Dr. Sidney J. Wilson, Fort Worth, secretary, Dr. David L. Bettison, Dallas, and treasurer, Dr. Martin L. Wilbanks, Greenville.

Health Department to Be Reorganized.—Complete reorganization of the health department of Dallas was authorized, May 16, at the session of the board of city commissioners, when ordinances were approved creating a board of hospitals and a board of health, and designating its duties. In the hospital board, which will consist of the mayor and nine members, there will be a superintendent of hospitals and a superintendent of emergency and home service. The health board, which consists of the mayor and twelve members, will conduct the work of the director of public health, and will be directly in charge of four branches of the city health office, namely, the city health officer, city sanitarian, city chemist and city registrar. Drs. Thomas J. Crowe, Joseph W. Bourland, Calvin R. Hannah, L. V. Lataste and Albert A. Jackson, Mexia, who resigned from the original board of health, have been reappointed members of the board of hospitals together with Dr. William C. Swain, and three laymen. The board of health consists of Drs. John W. Embree, Samuel M. Freedman, John. G. McLaurin, Oscar M. Marchman, J. J. Simmons, all of Dallas, and six laymen.

WASHINGTON

Personal.—Dr. Ernest F. Pope, Spokane, who returned to America from France, in April, is under treatment in the Peter Bent Brigham Hospital for thrombosis following pneumonia.——The charges of alleged misconduct made against Dr. Ralph Hendricks, city health officer of Spokane, have been investigated and have been found not to have been sustained.——Dr. Andrew M. Flynn, Tacoma, was held up and robbed in front of his residence, May 4.——Dr. Charles E. Eaton, Seattle, has been discharged from the Army after two years' service and has resumed practice.——William L. McClure, Major, M. C., U. S. Army, North Yakima, on duty in France, has been promoted to the rank of lieutenant-colonel.

WISCONSIN

New Officers.—At the annual meeting of the Wisconsin Surgical Association held in Milwaukee, May 8, Dr. William C. F. Witte, Milwaukee, was elected president; Dr. Karl W. Doege, Marshfield, vice president, and Dr. Daniel Hopkinson, Milwaukee, secretary-treasurer.

Personal.—Dr. John G. Barnsdale, Superior, convicted of violating the antinarcotic act, and denied further hearing, was taken by United States Marshall to Fort Leavenworth, June 11, where, in addition to a three year term in the penitentiary, he has been sentenced to pay a fine of $6,000.

WYOMING

New Hospital.—The new hospital for Laramie County, to be erected at Cheyenne, is to be known as the Frances Pershing Memorial Hospital in accordance with a contribution of $25,000 toward its cost to be made by Senator Francis E. Warren and Fred E. Warren. The hospital will cost $200,000, $75,000 of which is to be raised by the sale of the hospital bond issue and the remaining $100,000 by a special tax levy. Work on the building, which will occupy a portion of the grounds of the present Laramie County Hospital, will be commenced as soon as plans can be completed.

CANADA

Ontario Government to Manufacture Arsphenamin.—The Ontario Board of Health has been advised that the federal government at Ottawa has approved of its application to manufacture and sell arsphenamin. Dr. John W. S. McCullough, Toronto, chief officer of health for Ontario, claims that this privilege will be of the greatest importance in combating syphilis in Ontario.

Centers for Research in Ontario.—Hospital superintendents from Ontario met recently in Toronto at the call of the provincial secretary under whose department the hospitals of the province are administered. The efficiency and standing of these public institutions were discussed, and it is now the intention of the department to rebuild and staff those hospitals which were depleted of regular scientific help during war time. One of the largest and finest of these institutions, the one at Whitby, was handed over to the Department of Militia and Defense early in the war period; and the Central Prison at Guelph was also made use of as a convalescent hospital for returned soldiers. The Whitby institution will revert to the department at the end of June, and it is planned further to improve this institution and make it one of the finest hospitals for mentally afflicted in the world. In each hospital district of the province a medical center will be located.

GENERAL

President Wilson Congratulates New President of Association.—In recognition of the recent election of Surgeon-General William C. Braisted to the Presidency of the American Medical Association, President Wilson on June 17 cabled to him from Paris his personal congratulations.

Appropriation for Study of Influenza.—The Committee on Scientific Research of the American Medical Association has made an appropriation for the preparation of a critical summary of the epidemiology and bacteriology of the influenza pandemic. The work has been placed in charge of Prof. Edwin O. Jordan of the University of Chicago. It is requested that reprints of articles and statistical records on influenza be forwarded to Professor Jordan as soon as published.

Bequests and Donations.—The following bequests and donations have recently been announced:

Loomis Sanatorium, Saranac Lake; N. Y., $10,000, Association for Improving the Conditions of the Poor, New York City and Monmouth, N. J., Memorial Hospital, each $5,000 by the will of Mrs. Henrietta Kingsland.

To endow the Jane Dowst Emergency Hospital, Waukegan, Ill., $150,000, on the death of his sister, by the will of Charles Dowst, Waukegan.

Health Education Legislation.—"Health extension education" is provided for in a measure introduced by Senator Sheppard of Texas. The work would be directed by the U. S. Bureau of Education and the Public Health Service. A general work of education of civic and public health nature is to be conducted in all states accepting the service and a federal appropriation of $10,000 is provided for each state. The work would be carried on through the extension departments of the state universities. The purpose of the measure is to "establish and promote civic, social and health extension education."

Increase in Drug Addicts.—The special investigating committee of the Treasury Department in its final report, submitted, June 13, states that the nation-wide use of narcotic drugs for other than legitimate medical purposes has been steadily increasing in the United States during the last four years, despite vigorous efforts in the enforcement of the federal law; the number of drug addicts in the United States is estimated to be in excess of 1,000,000, and that imports of opium products and coca leaves into the United States have increased twice as rapidly as the growth of population.

Division of Tuberculosis Under Public Health Service.—The creation of a division of tuberculosis in the Public Health Service is provided for in a bill introduced by Senator Ransdell of Tennessee. The bureau is to be in charge of an assistant surgeon-general. The duties of the bureau are "to study tuberculosis and its causes and prevention and to demonstrate methods for its suppression." The establishment of an advisory council on tuberculosis is provided. The council is to consist of "ten competent men selected because of their special knowledge relating to public health," appointed by the Surgeon-General of the Public Health Service. Two members are to be retired each year. Their compensation would be $10 per diem and expenses. The Hygienic Laboratory Advisory Board, created by the act of July 1, 1902, would be abolished by the bill.

More Social Hygiene Appropriations.—The United States Interdepartmental Social Hygiene Board announces appropriations from its scientific research fund to the following institutions for the purpose of investigating "more effective medical measures in the prevention and treatment of venereal diseases":

University of Nebraska College of Medicine: (*a*) Investigation relative to the development of an internal urinary antiseptic. (*b*) Investigation of the value of certain anilin dyes in the treatment of gonorrhea. Both under the direction of E. G. Davis, M.D., director of pathological laboratory.

St. Louis University College of Medicine: Studies in infection by gonococci. Under the direction of Ralph A. Kinsella, M.D., director of department of experimental medicine.

Woman's Medical College of Pennsylvania: A serologic study of syphilis in pregnant women and new-born children with special reference to the efficacy of the accepted methods of syphilitic treatment. Under the direction of Bertha M. Meine, M.D., director of research department.

Washington University School of Medicine: The laboratory (biologic) investigation of the latent syphilitic as a carrier. Under the direction of Martin F. Engman, M.D., professor of dermatology, St. Louis.

Cornell University Medical College: Serologic study of the gonococcus group. Under the direction of John C. Torrey, Ph.D., professor of hygiene.

Jefferson Medical College of Philadelphia: A series of studies for the recognition and diagnosis of *Spirochaeta pallida* in venereal diseases and the effect of various drugs and materials as germicidal agents against *Spirochaeta pallida*. Under the direction of Randle C. Rosenberger, M.D., professor of hygiene and bacteriology.

FOREIGN

Infant Welfare Clinics in Greece.—The American Red Cross has established a number of infant welfare clinics in Greece where many young women of the highest classes of Greece are instructed in infant welfare, trained as nurses' aids, and are given clinical demonstration as to how children should be treated.

Protection of Students in Dissections and Laboratory Work.—A Spanish medical student, F. Simon, died last March from infection acquired in the class of practical anatomy at the University of Madrid. His father has recently founded an endowment of 12,500 pesetas the income of which is to be expended in protecting medical students against the dangers inherent in dissecting work, in laboratory research, and in aiding at operations.

Organization of Spanish Medical Association.—Among the conclusions voted at the First National Medical Congress, held at Madrid in May, was the organization of the Asociación Médica Española. As there was no opportunity for discussion of constitution and by-laws, a draft closely following the constitution and by-laws of the British Medical Association was adopted temporarily. The medical congress and its annex proved a great success for the first attempt at a national gathering of the kind in Spain. The lay attendance at the exhibition was surprisingly large.

Medical School in China Opens.—The Peking Union Medical College, Peking, China, which has been built under the direction of the Rockefeller Foundation, will open for the instruction of students in October, 1919. The college will give a four years' course in medicine and an additional year of special work in hospitals or in laboratories. The school will be coeducational. There is also a premedical school offering a three years' course preparatory to admission to the medical school. This premedical school was opened in September, 1917.

Prize for Work on Radiology.—The French Society for Medical Radiology founded an annual prize of 300 francs for the best article on some radiologic subject presented in competition. The war interrupted the custom but the society now announces that the prize will be awarded this year, and states that all competing articles must be in the hands of the secretary before Oct. 1, 1919. Address Dr. Haret, rue Pierre-Haret, 8, Paris IX. Full details in regard to the prize offer were given in the *Bulletins de la Société de Radiologie*, March, 1914, p. 112. Five copies of the article must be presented.

Deaths in the Profession Abroad.—Dr. A. Lecha-Marzo, professor of legal medicine at the University of Sevilla, Spain, aged 31. At the age of 18 he published an article on hemochromogen crystals as a means of identifying blood, and later communications on dactyloscopy and on the tear sign of actual death carried his name far and wide.——The *Nederlandsch Tijdschrift* mentions the death of Bernhard S. Schultze, honorary professor of obstetrics and gynecology at the University of Jena, aged 91. He published his paper on the swinging method of artificial respiration for the newly born in 1866.

CORRECTION

Sterility of Catgut.—In the article on this subject published in The Journal, June 14, page 1736, the names of the authors should be C. T. Butterfield and Leo F. Ey.

MEXICO LETTER

Mexico City, Mexico, June 8, 1919.

Association of Medical Students

The medical students have formed an association to work for the intellectual, moral and physical progress of the whole class. The inauguration of the society took place with ceremonies, at which the president of the university and the dean of the school of medicine presided. At the same meeting, honorary diplomas were distributed among the medical students who had obtained them during the school year of 1917.

The Army Medical Board

By direction of the army and navy departments there has been organized a commission composed of army physicians of different rank, for the purpose of studying and proposing reforms that may be necessary in the sanitary service of the army. Dr. J. J. Sánchez, former professor of anatomy in the school of medicine, is the president of this commission.

The Study of Typhus

The University of Harvard has informed the University of Mexico, that provided the required facilities are available, Dr. S. B. Wolbach, professor of bacteriology at Harvard, will come to this country in the near future to make a study on the etiology of the tabardillo (typhus). President Macías answered by telegram that Dr. Wolbach will be most welcome, that all possible aid will be given to him, and that his trip is timely, as there are various questions relating to typhus remaining unsolved, as can be seen from the papers presented at the congress on this disease held here last January. It may be well to remember that about ten years ago, Dr. H. T. Ricketts came to Mexico for purposes similar to those of the Harvard bacteriologist, which unfortunately he could not carry out because of his having contracted the disease and died shortly afterward. Mexico has not been ungrateful towards this martyr of science: one of the laboratories of the *Instituto Bacteriologico Nacional* has in a prominent place on its walls the portrait and the name of this American physician as a tribute to his memory.

Generous Legacy

Information has just been received by the government that Sr. Alberto Parres, who died in Paris and was believed to have left no will, bequeathed $3,000,000 to private benevolent institutions. Sr. Parres was on a pleasure trip in Europe when he died.

Public Poisoning

It has been ascertained that in the city of Saltillo some unscrupulous persons were making bread and pastry dyed with chromate of lead instead of yolks of eggs; other manufacturers were coloring their products with saffron. The first have been prosecuted as poisoners, while the latter will be just fined.

Interest in the English Language

It is remarkable the increasing interest in the English language in Mexico. Three of the newspapers with the largest circulation are written in both Spanish and English; another one in French and English.

BUENOS AIRES LETTER

Buenos Aires, May 5, 1919.

New Outbreak of Influenza

In one of the concentration zones for navy recruits located in the harbor of this capital and very near the Immigration Barracks, there has been observed during the last months an outbreak of influenza of short duration but rather serious, for in some days there were more than 200 cases and six deaths. When the concentration of the naval recruits took place, several outbreaks of influenza occurred in different military zones, especially in the province of Entre Ríos, but they are now on the decline and the mortality has always been very low. In different places (Santiago del Estero, Corrientes, Goya, La Banda, etc.) there have been outbreaks which, while affecting a large portion of the inhabitants, have never assumed much seriousness.

Anthrax

For the last two or three years there has been a notable increase of anthrax in rural sections all over the country. Several official and private organizations have advised the compulsory antianthracic vaccination for animals. At present vaccination is voluntary on the part of the owners. There has also been recommended the appointment of an official controller of vaccination, and a commission studied the matter but without reaching definite conclusions.

Bubonic Plague

After the disappearance of the outbreak of bubonic plague at Salta and Jujuy there have occurred some cases at the railway station at Los Cisnes of the province of Córdoba and also on one of the railway lines that have terminals at the port of Buenos Aires, but both outbreaks have now ceased.

Entrance Examinations to the School of Medicine

The School of Medicine has so many first year students (800) that some measures were needed to limit this excessive number as neither the buildings nor the teaching equipment was sufficient. The staff deemed it, therefore, necessary to require an entrance examination that would permit a selection of the best applicants and decrease somewhat the number of the students. It is authorized to that effect by the law of organization of national universities, but the new students thought they could obtain the revocation of the measure by going on a strike. The board of directors of the School of Medicine would not change its attitude, which received the unanimous support of the students. The movement of the new applicants therefore failed and the entrance examinations remained in force. The dean of the school, Dr. Julio Méndez, who was elected by the students themselves, disapproving of the entrance examinations, when he saw that the students were supporting the board of directors, presented his resignation which was accepted. New elections will therefore be held in the near future to fill the positions of dean and also of a director.

University Appointments

There have been appointed the following professors: Of surgical clinics, Dr. J. Arce; of gynecology, Dr. J. F. Molinari; of pediatrics, M. Acuña; of anatomy, Dr. C. Jakob; of organic chemistry (pharmaceutical), Dr. P. J. Mesigos. Dr. Arce, in his opening address, stated that it is the intention to establish a complete institute of surgical clinics with a research laboratory, etc. In accordance with the new regulations, a number of the substitute professors have commenced to give complete courses which the school considers as valid as those given by the regular professors. A number of other professors have also been authorized to give *cursos libres* (optional courses).

Death of Dr. Penna

Dr. José Penna, the leader in most of the work done in this country against infectious diseases and in charge of the most important sanitary campaigns, and professor of infectious diseases in the School of Medicine, has died suddenly. For nearly forty years no important work was done in public health without his cooperation. He directed and organized the Department of Public Assistance of Buenos Aires and the National Department of Public Health, in which he carried to a satisfactory conclusion the organization of the Bacteriological Laboratory commenced by Dr. Malbrán. Professor Penna published a number of articles on clinical medicine and had an exceptional experience in the diagnosis of infectious diseases.

LONDON LETTER

London, May 28, 1919.

Vital Statistics

Although a considerable decline is recorded in the rate of the mortality in England and Wales during the first three months of this year, as compared with the last quarter of 1918, deaths again exceeded births, the natural decrease of population being 47,002, against 79,443 in October, November and December. The birth rate was unprecedentedly low, representing an annual rate of only 15.6 per thousand of the population. Influenza was either a primary or a contributory cause of death in no fewer than 37,697, or nearly 20 per cent., of the total deaths registered last quarter. Infant mortality, measured by the proportion of deaths under 1 year of age to registered births, was equal to 149 per thousand, being 31 per thousand above the average in the corresponding period of the last ten years.

Smallpox in England and Wales

The danger of the introduction of smallpox into this country by soldiers returning from abroad, which has been apprehended, has been realized. About 100 cases have occurred in England and Wales, including about a dozen in London. The infected soldiers passed through demobilization camps while incubating the disease, and generally the first symptoms were manifested on reaching their homes. On account of the modification produced by infantile vaccination, the nature of the disease was not recognized until it spread to others, especially to unvaccinated persons (of whom, as shown in previous letters, there are large numbers in this country in consequence of the neglect of vaccination). In some cases the disease was introduced by sailors and other persons returning from Portugal, where it is prevalent.

Defective Training of Physicians in Ophthalmology

A report on the teaching and examination of medical students in ophthalmology, issued by the Council of British Ophthalmologists, emphasizes the need of adequate training, particularly in view of the unfavorable position held by Great Britain compared with France, Switzerland, Spain, the United States and many other countries. An analysis of the existing regulations concerning the teaching and examination in ophthalmology in the United Kingdom and abroad shows that Great Britain stands almost alone in granting diplomas to practice medicine without evidence of an adequate knowl- edge of diseases of the eye. There are still three examin- ing bodies that have not even adopted the recommendation of the General Medical Council of 1891 which requires a certificate of attendance at a three months' clinical course. Moreover, at other institutions the interpretation of what is meant by a three months' course varies greatly and should be more accurately defined, as it is by all the American universities. In Great Britain only a small minority of the licensing bodies apply regularly a test of ophthalmic knowl- edge. In Ireland and in the great majority of foreign uni- versities, ophthalmology is one of the subjects of the qualifying examinations, and the examiners are invariably ophthalmic surgeons. The knowledge of ophthalmology possessed by the majority of medical students in Great Britain at the time of their qualification is inadequate to enable them to diagnose and treat efficiently cases of ordinary eye diseases encountered in general practice. The council holds that it is desirable that the training in ophthalmology should be mainly clinical, and agrees that a period of three months is all that can be allotted to the subject in a five years' curriculum. The council recommends, therefore, (1) that attendance at an ophthalmic clinic for not less than six hours a week during a period of three months shall be required of every student, and (2) that such a period of clinical training shall be supplemented by a course of systematic lecture or clinical classes. A serious defect is the absence of any test of the student's knowledge of ophthalmology in the qualifying examinations. Teachers in the medical schools are well aware that without the stimulus of an examination, many students give the least possible attention to ophthalmology and may, and often do, finish their training without gaining even a rudimentary knowledge of the subject. In the opinion of the council, it is most desirable that an examination in ophthalmology should be made an integral part of the qualifying examination by all those licensing bodies that have not heretofore included it in their schedule.

The council recommends that: (1) No student shall be admitted to the final examination qualifying to practice in medicine, unless he has attended an ophthalmic clinic for not less than six hours a week during a period of three months and has attended a course of systematic instruction in ophthalmology, and (2) no student shall be considered to have passed the qualifying examination unless he has shown a sound knowledge of practical ophthalmology in an examination conducted by ophthalmic surgeons.

CUBA LETTER

Havana, May 27, 1919.

New Hospitals and Asylums

The Department of Charities has dedicated a new building in the town of Guanabacoa destined to give shelter to the aged and destitute.

The Grand Masonic Lodge of Cuba will also soon open an asylum for old people called "La Misericordia." The corner stone of the last building of this institution was laid May 20, Cuban Independence Day.

Güines, a town of about 25,000, in the province of Havana, is building a new hospital to cost $100,000.

The Association of the natives of the Canary Islands has purchased the site for their hospital. It will have a beautiful location on the road from Havana to Bejucal.

Plans for Better Dwellings

The old *bohio*, the traditional country dwelling of the Cuban peasant, will, for sanitary and hygienic reasons, soon be a thing of the past. The *bohio* is a small frame dwelling built level with the ground and has a roof of palm leaves and a dirt floor. It has no sanitary conveniences whatever, and usually consists of only one room, in which the family lives, sleeps, cooks and—dances. The Board of Health of the Republic has invited architects to present plans and estimates for the construction of comfortable and sanitary dwellings for the country population, and has offered a prize of $500 for the best plans.

Personal

Drs. Orosman Lopez, Y. Clark and C. Yarini have been appointed professors at the Dental School, University of Havana. Dr. J. A. Hernandez Ybañez has been appointed assistant in physiology at the University of Havana Medical School.

Requisites for Acceptance of Foreign Diplomas by the Cuban Authorities

Heretofore any physician in possession of a medical diploma has been permitted to practice in the Republic of Cuba after passing an examination and paying the appointed fees. A bill just passed by the House of Representatives will impose certain restrictions and conditions on foreign medical graduates. They will have to prove the authenticity of their diplomas, since counterfeits have been quite com- mon. They must also pass an examination in every subject of the curriculum of the medical school. There are thus nearly thirty different subjects in which the applicant must pass. Failure in any one of them deprives him of any further trials.

Marriages

Alford Edwards Budde, Capt., M. C., U. S. Army, North Chicago, Ill., on duty in London, England, to Miss Madeleine de Colnet d'Huart of Bayswater, London, April 16.

Herbert L. Wilbur, Capt., M. C., U. S. Army, Granby, Mo., to Miss Cora B. Scott of Washington, Ind., June 8.

Lesley Tracy Gager, Stonington, Conn., to Miss Josephine Willoughby Chapman of Towson, Md., June 15.

Edward Montgomery Duncan, Govans, Md., to Miss Clara May Owens of Norwalk, Conn., June 2.

Frank Thomas Fort, Louisville, Ky., to Miss Elizabeth Odele Brown, at Baltimore, June 4.

Frank W. Morley to Miss Florence Sneider, both of Toledo, Ohio, May 27.

Elmer Leonard Mertz to Miss Hazel L. Cooper, both of Rockford, Ill., June 7.

Deaths

Victor Clarence Vaughan, Jr. ⊕ **Major, M. C., U. S. Army,** Detroit; University of Michigan, Ann Arbor, 1902; aged 39; on duty with the American Expeditionary Forces in France; was accidently drowned in France, June 10. Major Vaughan was associate professor of preventive medicine and assistant professor of medicine in the Detroit College of Medicine and Surgery; a specialist in internal medicine, at one time was health officer of Detroit, and was a member of the American Association of Pathology and Bacteriology.

Edward Kent Armstrong ⊕ Chicago; Dearborn Medical College, Chicago, 1904; University of Illinois, Chicago, 1905; Northwestern University Medical School, Chicago, 1910; aged 38; a specialist in pediatrics; superintendent of the Municipal Contagious Disease Hospital of Cook County, 1917; who had served in France since April, 1918, and was later assigned to duty in Palestine where he was engaged in repatriation work; is reported to have been killed recently in an automobile accident.

Lewis Merritt Palmer ⊕ Framingham, Mass.; Harvard Medical School, 1881; aged 68; a specialist on diseases of the ear, nose and throat; medical examiner (coroner) for the eighth Middlesex district since 1902; surgeon to the Framingham Hospital, and the Reformatory for Women; trustee of the Massachusetts Training School, and treasurer of the Massachusetts Medico-Legal Society; died at his home, June 4, from angina pectoris.

Warren Schoonover ⊕ New York City; College of Physicians and Surgeons in the City of New York, 1867; aged 81; house physician, secretary and a member of the board of managers of the Northeastern Dispensary since 1873; a member of the American Academy of Medicine and American Public Health Association; died in the Broad Street Hospital, New York City, June 3, after an operation for the removal of an abdominal growth.

Mgrditch Simbad Gabriel ⊕ New York City; Central Turkey Medical College, Aintab, 1881; aged 62; professor of practice of medicine in his alma mater in 1885 and 1886; since that date a practitioner of New York City; president of the Armenian General Progressive Asociation; author of several works on Armenia; editor of an Armenian magazine; died in the North Hudson Hospital, Weehawken, N. J., June 3.

Edward E. Lindeman ⊕ New York City; Johns Hopkins University, Baltimore, 1908; aged 39; formerly acting assistant surgeon, U. S. P. H. and M. H. Service; a fellow of the New York Academy of Medicine; an authority on the transfusion of blood; who was in attendance at the meeting of the American Medical Association in Atlantic City; was accidentally drowned, June 12, while bathing.

Caroline V. Wiley Anderson, Philadelphia; Woman's Medical College of Pennsylvania, Philadelphia, 1878; aged 70; one of the foremost negro physicians of Philadelphia; for many years in charge of the medical department of the twenty-ninth ward and vice president of the Berean Manuel Training School; died at her home, June 3, from cerebral hemorrhage.

Adolph Brand, New York City; College of Physicians and Surgeons in the City of New York, 1904; aged 40; a specialist in dermatology; a member of the American Urological Society and New York Academy of Medicine; dermatologist to the Hospital for Deformities and Joint Diseases; chief dermatologist to St. Bartholomew's Clinic, and assistant dermatologist to Bellevue Hospital; died at his home, June 2.

Arthur Howard McCray, Lieut., U. S. N. R. F., Helena, Mont.; George Washington University, Washington, D. C., 1915; aged 38; state bacteriologist of Montana; who contracted Rocky Mountain spotted fever from an inoculated guinea-pig, June 5; died in a hospital in Helena, June 15, from the disease.

Philander S. Root ⊕ Monroe, Mich.; Detroit Medical College, 1881; aged 63; president of the Monroe County Medical Society in 1913, and secretary in 1917; local surgeon of the Lake Shore and Michigan Southern Railroad; also a banker and newspaper publisher; died at his home, June 6, from heart disease.

Denman Rathbun Kinsell, Jr., Columbus, Ohio; Ohio Medical University, Columbus, 1898; aged 57; a member of the Ohio State Medical Association; a member of the associate staff of the Lawrence Hospital, Columbus, and of the American Electro-Therapeutic Association; died at his home, June 3.

William Elzie Terry, Long Beach, Miss.; Kentucky School of Medicine, Louisville, 1897; aged 49; a member of the Mississippi State Medical Association; while returning from a professional call and driving over a grade crossing near Long Beach, May 15, was struck by a train and instantly killed.

Clarence F. Barker, Okenama, Mich., formerly of Chicago; Hahnemann Medical College, Chicago, 1880; aged 67; for twenty years professor of surgery in his alma mater; died in Milwaukee, June 7, from shock following the amputation of a leg, on account of diabetic gangrene.

Henry Clay Day, Bennington, Vt.; College of Physicians and Surgeons in the City of New York, 1870; aged 74; for twenty-five years a druggist of Bennington; a member of the village board of trustees, and school trustee; died at his home, May 26, from acute gastritis.

Oscar Fitzallan Swasey, Beverley, Mass.; Bowdoin Medical School, Brunswick and Portland, Me., 1853; aged 92; a member of the Massachusetts Medical Society; for several years town physician and a member of the staff of Beverly Hospital; died at his home, June 4.

Samuel Smith Shields, Carbondale, Pa.; Medical College of Georgia, Augusta, 1873; aged 71; for many years chief of staff of the Carbondale Emergency Hospital; a fellow of the American Academy of Railway Surgeons; died at his home, May 30, from heart disease.

Elisha D. Beard, Brownsburg, Ind.; Medical College of Indiana, Indianapolis, 1893; aged 52; for fifteen years a practitioner of Indianapolis; while driving his car over a grade crossing near Avon, Ind., May 1, was struck by a fast train and instantly killed.

William M. Floyd ⊕ Henderson, Ky.; University of Louisville, Ky., 1891; aged 52; a specialist on diseases of the eye, ear, nose and throat; once president of the Henderson County Medical Society; died at his home, May 17, after an operation for appendicitis.

Freeman Dodd Bosworth, Coolidge Corner, Mass.; Harvard Medical School, 1906; aged 43; examining physician for the Boston Society for the Care of Girls; one of the founders of Lancaster Hospital, Brookline; died in that institution, June 2.

John G. Brennen, New York City; College of Physicians and Surgeons, Baltimore, 1914; aged 33; a graduate of Columbia University College of Pharmacy in 1905; died in the Manhattan State Hospital, May 16, from general paralysis.

Frederick Kendall Brown ⊕ Philadelphia; Jefferson Medical College, 1890; Medico-Chirurgical College of Philadelphia, 1896; aged 54; assistant ophthalmologist to the Pennsylvania Hospital Dispensary; died at his home, May 31.

Thomas H. Monahan, Salt Lake City; Minneapolis College of Physicians and Surgeons, 1886; aged 51; formerly in charge of the Northern Minnesota Hospital, Crosby; died at his home, recently, from cerebral hemorrhage.

William Parker Mercer, Elm City, N. C.; New York University, New York City, 1879; aged 64; for two terms state senator from Edgecomb County; died at his home, May 28.

⊕ Indicates "Fellow" of the American Medical Association.

William Hoyt, Hillsboro, Ohio; Cleveland University of Medicine and Surgery, 1867; aged 79; a veteran of the Civil War; medical director of the Department of Ohio, G. A. R., in 1903; died at his home, May 31.

William E. Courson, Beulah, Miss.; Southern Medical College, Atlanta, Ga., 1884; aged 55; a practitioner since 1882; who went to California about six months ago for his health; died in Alhambra, Calif., May 22.

J. O. Wharton, Waverly, Ind.; Indiana Medical College, Indianapolis, 1877; aged 67; died in Martinsville, Ind., April 13, from injuries to the chest received in an automobile accident five months before.

Woods Frederick Derr ⊕ Williamsport, Pa.; Johns Hopkins University, Baltimore, 1915; aged 29; a specialist in surgery; died at the home of his parents in Watsontown, Pa., May 27, from tuberculosis.

John Henry Thompson, New York City; New York Medical College, New York City, 1853; aged 84; surgeon of U. S. Volunteers during the Civil War; died at his home, June 7, from arteriosclerosis.

Michael J. Griffith, Washington, D. C.; Georgetown University, Washington, 1869; aged 79; a veteran of the Civil War; deputy registrar of wills for forty-three years; died at his home, May 25.

Charles Biddle Bush ⊕ Philadelphia; Jefferson Medical College, 1885; aged 59; a specialist on diseases of the eye, ear, nose and throat; died in the Orthopedic Hospital, Philadelphia, May 27.

Henry C. Dimond, Philadelphia; University of Pennsylvania, Philadelphia, 1881; aged 63; formerly secretary of the Clark County (Ohio) Medical Society; died at his home, January 4.

Edward B. Schwartz, Buffalo; University of Buffalo, N. Y., 1881; aged 52; consultant to the City Hospital for Women, Buffalo; a musician and linguist of talent; died at his home, May 23.

William Herbert Beazley, Sheppard, Texas; New Orleans School of Medicine, 1867; aged 81; a member of the State Medical Association of Texas; died at his home, May 18.

Charles P. King, Newark, Ohio; Jefferson Medical College, 1867; aged 78; died at St. Anthony's Hospital, Columbus, Ohio, May 28, from cerebral hemorrhage.

George Robert Spooner, Worcester, Mass.; Hahnemann Medical College, Philadelphia, 1870; aged 72; a veteran of the Civil War; died at his home, May 24.

Jacob C. Knowles, Seaford, Del.; College of Physicians and Surgeons, Baltimore, 1897; aged 53; died at his home, May 23, from carcinoma of the liver.

James Calvin Stem, Goldsboro, Pa.; Cincinnati College of Medicine and Surgery, 1878; aged 64; died in York, Pa., May 18, from cerebral hemorrhage.

Thomas Benton Brooks, Lynch, Ky.; Kentucky University, Louisville, 1903; aged 49; died at the home of his wife's parents in Valley, Ky., May 20.

John C. Dalton, Pasadena, Calif.; Starling Medical College, Columbus, Ohio, 1874; aged 69; died at his home, May 19, from arteriosclerosis.

Stephen L. Strickler, Boggstown, Ind.; Eclectic Medical Institute, Cincinnati, 1879; aged 65; died at his home, May 23, from cerebral hemorrhage.

Solomon Lewin, Chicago; Ensworth Medical College, St. Joseph, Mo., 1892; aged 62; died in Los Angeles, May 24, from aneurysm of the aorta.

Clarence C. Bullard, Opelika, Ala.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1891; aged 55; died at his home, June 1.

Charles E. Angell, Delphi, Ind.; Jefferson Medical College, 1880; aged 68; died at his home, May 15, from cerebral hemorrhage.

Bertha Emma Zahn, Bascom, Ohio; Ohio Medical University, Columbus, 1898; aged 48; died at her home, about May 24.

Joseph B. Eversole, Adeline, Ill.; Rush Medical College, 1866; aged 86; died at the Ogle County Home, Ore., May 24.

J. Allen Harrison, Philadelphia; Hahnemann Medical College, 1892; aged 46; died at his home, May 25, from influenza.

Perry C. Johnson, Lakeland, Fla.; Eclectic Medical Institute, Cincinnati, 1889; died recently at his home.

Edward D. Hope, Macon, Ga.; Atlanta (Ga.) Medical College, 1891; aged 58; died at his home, May 18.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

MORE MISBRANDED NOSTRUMS

Samaritan Nervine.—Shipped about January, 1913, by the Dr. S. A. Richmond Nervine Co., St. Joseph, Mo. Analysis showed the preparation to contain nearly 19 per cent. of potassium bromid, with indications of atropin. Falsely and fraudulently represented as a specific for epilepsy, seminal weakness, every form of kidney disorder, pulmonary affections, rheumatism, gout and heart disease, and as a cure for scrofula, syphilis, loss of hearing and paralysis. Fine, $45 and costs, imposed Sept. 18, 1917.—[*Notice of Judgment No. 6309; issued May 10, 1919.*]

Phenol Sodique.[1]—Shipped about July, 1915, by Hance Bros. & White, Philadelphia. Falsely and misleadingly claimed to be non-poisonous, when in fact it contained phenol (carbolic acid), and to be effective as a disinfectant when used according to directions, when as a matter of fact placing the product in shallow vessels or sprinkling a solution of it about the apartment would not disinfect impure and unhealthy localities or prevent the spread of yellow fever, typhoid fever, scarlet fever, cholera, etc. It was declared misbranded also, in that it contained no ingredients or combination of ingredients which would cure catarrh, erysipelas, piles, sprains, ulcers and various other ailments mentioned in or on the trade package. In June, 1918, Hance Bros. & White consented to a decree, and judgment of condemnation and forfeiture was entered. On the order of the court the product was delivered to the company on the payment of the costs and execution of a bond.—[*Notice of Judgment No. 6313; issued May 10, 1919.*]

Nuxcara.—Shipped about April, 1916, by Reuben B. Kelley, president of the Nuxcara Mfg. Co., Atlanta, Ga. Analysis showed the product to contain over 11 per cent. of alcohol, together with cascara, strychnin and berberin, and small quantities of other vegetable material. Falsely and fraudulently represented as a positive remedy for indigestion, dyspepsia, catarrh, bronchitis, rheumatism, neuralgia, etc., and as a cure for kidney and liver trouble, chronic appendicitis, etc. Fine, $25, imposed November, 1918.—[*Notice of Judgment No. 6340; issued May 10, 1919.*]

Dr. A. Upham's Valuable Electuary.—Shipped about October, 1916, by John Green Hall and Augustus Steele Hall, copartners, trading as J. G. & A. S. Hall, Oxford, N. C. Analysis showed the preparation to be a tablet composed essentially of cream of tartar, potassium nitrate, resins, sugar, sulphur, gum and vegetable extractives. Falsely and fraudulently represented as an infallible remedy for internal, external, blind and bleeding piles, and as a remedy for all affections of the bowels, liver complaint, dyspepsia, etc. It was also fraudulently represented as a remedy for paralysis, apoplexy and measles, and as a cure for tumors, inflammation of the stomach, kidneys, etc. Fine, $100 and costs, imposed June, 1918.—[*Notice of Judgment No. 6349; issued May 10, 1919.*]

Malaria.—Malaria is derived from two Italian words, *Mal* and *Aria,* which mean bad air. The record of malaria reaches back to Hippocrates, who lived 400 years before Christ. Hippocrates divides the disease into the "every-day chills" and the "every-other-day chills."—*Malaria Circular,* North Carolina Board of Health.

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[1] A report of the Council of Pharmacy and Chemistry on "Phenol Sodique" was published in this department of THE JOURNAL, Nov. 9, 1907. The Council declared that the claims made at that time for Phenol Sodique were "unscrupulous" and "a positive menace to the public health."

Correspondence

"THE GOLDENROD AND 'HAY-FEVER'"

To the Editor:—I have read with approval and interest the defense of goldenrod as a cause of hay-fever in The Journal, May 31, by my distinguished confrère, Dr. John Noland Mackenzie of Johns Hopkins University.

As an old practitioner of otolaryngology I have seen the various nostrum serums, infusions, etc., "have their day and cease to be," and have noted "how fast does system follow system from sunlight to the sunless land."

It was in 1891 that I first developed well-marked hay-fever, while on a visit to Manitou Springs, Colo., of more than 6,500 feet elevation, at the foot of Pike's Peak, where the commonly believed pollens of hay-fever are not found. I was then practicing medicine in Kansas City, and up to that time had only a supersensitive schneiderian membrane, sneezing frequently, under varying conditions of slight nasal irritation, changes from heat to cold, sunlight, etc. I spent several weeks in Manitou, afflicted with typical nasal hay-fever, and went on to California and up to British Columbia, remaining about two weeks, during which time all symptoms disappeared. But I had no sooner come into the high lands of Wyoming on my way home, when all the old symptoms returned, and they continued annually ever since from mid August to near October 1, though through all the year I am as of old more or less subject to sneezing on slight provocation. During my "season" I dare not use any applications, for even the mildest and most "soothing" seem to set up irritation. Menthol has always been very irritating. During the year 1893 I was in London, engaged in the study of my specialty, and returned to America, September 1, landing at New York. I had no symptoms until I reached Washington, D. C., a few days later.

About five years ago I spent the summer, until September 1, on the Mississippi Sound at Pass Christian. I started to St. Louis the last day of August, and felt no distress until I arrived in Memphis next day. During the summer of 1918 I was major chief of the Head Section of Base Hospital, Camp Beauregard, La. This camp is in the center of the state, 192 miles northwest of New Orleans. The Red River cuts across the county in which the camp was located, from East to West, and marks sharply the north line of the sugar belt. North of the river are high hills clad with pines, oaks and most of the indigenous trees of the South or Central states. Below the river the topography is as different as if one were in two different countries. There we had vast flat lands covered with cotton, cane, corn, with swamp forests and low lands adjacent. There is no flora growing in and around St. Louis that does not flourish in this section; and, as might be imagined, there are many varieties that are not found in the uniformly high lands around St. Louis; yet I had not even a sniff of hay-fever during my incumbency at this camp.

About fifteen years ago, Dunbar, whose serum nostrum has had so much advertising and patronage with the profession, visited St. Louis. The otolaryngologists were celebrating him, for his star was at that time in the ascendent. No one cared to say anything critical of the distinguished professor. Among his adulators was an otolaryngologist of St. Louis, well known throughout America. It was then late August in the midst of the hay-fever season. At the special meeting of the local society, which Dunbar addressed, this otolaryngologist hazarded the statement that he was then treating twenty cases of hay-fever with Dunbar's serum, with complete or partial relief to nineteen. I do not quote this as intending to be critical, but I have often felt an amused desire to ask how many cases he is curing now. Having a suburban home, it happened that the day of this meeting I had some high blue-grass pasturage cut, the grass, of course, being mixed with goldenrod, ragweed and all the rest of the indicted flora. I wanted to present myself before Dunbar as a "horrible example," so I went out and wallowed in the new mown hay, then plucked a fresh sprig of "the bride of the autumn sun," and none the worse, presented myself at the meeting and told Dunbar and his adulators that his remedy was based on assumption and empiricism.

Dr. Mackenzie well says that "the true character of this remarkable disorder is still elusive, baffling and far off. Through the uncertain and changing atmosphere which surrounds it we as yet see dimly." The mystery of this most mysterious disease! Rational, considering men who are not swept from their mental moorings by preconceived desire and ephemeral circumstance, or brow-beaten by inconclusive hypothesis, say to each other, as did the intellectual Iago: "Virtue! a fig! 'tis in ourselves that we are thus or thus"; or as did the far-visioned Hamlet: "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy."

Fayette C. Ewing, M.D., St. Louis.

COMFORT AND COLD

To the Editor:—It is a never-ceasing source of wonder that certain fundamental principles are so slowly grasped by the human mind. The article of Major Head (The Journal, May 3, 1919, p. 1268) is an admirable example of the misunderstanding of fresh air treatment of pneumonia, and Major Head is particularly to be commended for his frank statement of the case. The results as shown should have been expected, and it is hoped that the conclusions that he draws will be indelibly limned on the minds of the medical profession with the cause accentuated so that such errors may never again be repeated.

Those who have been accustomed to the use of the fresh air treatment of tuberculosis and pneumonia will agree that the fundamental truth to be insisted on is that the patient shall never be uncomfortable; that discomfort is incompatible with rest; that shivering is nature's method of fighting discomfort and raising temperature; that depression is to be avoided at all times; that it is quite possible to be in the cold and yet not be cold; that if the patient is uncomfortable it is due to his not being properly taken care of—that some minor technic has been overlooked by the nurse, and that the nurse is in a majority of cases the one responsible for failure. I myself have found this so much to be the case that I regard the comfort of the nurse, and attention to her clothing, shoes and surroundings as the first things to provide, after which I could expect her to take care of the patient; but if the nurse is uncomfortable I should count on the patient's being neglected.

The requirements are so simple that sufficient stress has not been laid on them. Outdoor treatment has not been carried out in its entirety even in sanatoriums where such treatment should have been familiar. I have known of hospitals where the climate was expected to be cold so constructed and outfitted that cold weather caught them unprepared for just such emergencies.

If patients are properly protected below the mattress as well as above, the pillows properly arranged, proper nightcaps supplied, and bed socks and shields prepared, they can stand almost any climatic change with comfort—their bodies in the climate of Florida while their noses may be in the arctic regions. As Major Head says, "The skins must be red, *not blue; they must be warm, not cold.*" *Only* cold will beat down their fever, stimulate their hearts, and supply them with unprebreathed air. Breathed or exhausted air can produce no more heat than the ashes of coal or wood. Rain, fog and excessive breeze should all be deflected; and as to the windows and doors, that is a matter of orientation and architecture that varies in every case.

The vision of my old, French-Canadian guide rising ruddy and refreshed from his bed of spruce between the heavy logs that he had cut for himself, and shaking off the 3 inches of snow that had fallen in the night, while I could hardly venture from my heated tent, comes before me. He had taken care with the logs on each side and at the head and foot to cut off the entrance of air to his body; while, he being wrapped in his blanket and his cap pulled down, the rising vapor of his breath kept an *open chimney through* the snow to the outer air. Eighty years of life in the open had taught him the value of fresh air.

If there is one principle that was demonstrated by the mass of statistics in the War of the Rebellion, it was that the old campaigner who knew how to take care of himself in a tent withstood his pneumonia better than in the closed ward of the hospital, while the raw recruit who did not know how to keep himself warm suffered.

The architecture of our camp hospitals has improved very much since those days, and the proper ideas of ventilation have been widely accepted.

But bearing in mind the principles outlined above of the absolute comfort of the patient being the essential thing, plus the unprebreathed, undeoxygenated air, much that seems strange in Major Head's statistics would be explained.

J. Clinton Foltz, M.D., Chestnut Hill, Philadelphia.

"SEROLOGIC CURE (?) IN THE LIGHT OF INCREASINGLY SENSITIVE WASSERMANN TESTS"

To the Editor:—In The Journal (May 24, 1919, p. 1526) Wile and Hasley discredit the Wassermann as a therapeutic guide, saying: "As a guide to therapeusis the Wassermann reaction does not have a leg to stand on. We stand today with regard to the treatment and cure of syphilis as did the syphilologists of the pre-Wassermann day." To these statements I cannot subscribe, and I wish to point out wherein Wile and Hasley appear to me to be in error. They have attempted to draw a parallel between the Wassermann reaction and the tuberculin test. This adds nothing to the force of their argument because: First, it has never been proved that in the presence of a positive tuberculin test there are not living tubercle bacilli; and, second, as stated, we do not know the exact mechanism of the Wassermann reaction. We do know, however, that with certain well known exceptions, the Wassermann reaction is diagnostic of syphilis. In other words, we know that, with these exceptions, it never occurs in a person who has not at some time harbored living spirochetes.

Most syphilologists and serologists will admit that the Wassermann test performed with ice-box incubation is more delicate in detecting the "Wassermann bodies," both in untreated and in treated patients. This does not mean *a priori* that because it is more delicate the test is not an indication of living spirochetes, which we know must be present to produce it in the first place. And even Wile and Hasley admit, and show by their statistics, that the Wassermann test as carried out by the ice-box incubation method is sometimes completely negatived by treatment (over 15 per cent. of their cases, as against 50 per cent. by the older method). Furthermore, because the ice-box incubation creates a more delicate test than the water-bath incubation, it does not follow that eventually a technic will be developed which will be so delicate as to detect all persons who have ever had syphilis, regardless of whether or not a cure has been accomplished.

We know that certain of our patients whom formerly, by the older methods of performing the Wassermann test, we considered as probably cured have come back to us in one or more years with positive tests. Wile and Hasley have not shown that cases in which the ice-box Wassermann test was negatived eventually, by treatment, become positive. But even if this does occur, and I think it probable, why should we tell these patients that they are cured, provided, of course, a clinical cure exists, when we have evidence of a positive test which we know never exists without at least a previous active syphilis?

There are certain cases which are "Wassermann fast." The discovery of more of this type of case by the ice-box method is merely an indication that we are getting fewer complete cures than we formerly thought we were, and that these patients should all be treated as syphilitics, receiving courses of treatment periodically throughout their lives.

In so-called primary syphilis the Wassermann test never becomes positive on account of the treatment the patient receives. If treatment will keep a patient from developing a positive Wassermann test which, in untreated cases, is an indication of the presence of living spirochetes, and we assume the syphilis has been cured in such patients, a constantly negative test following treatment of a patient who formerly had a positive test is an indication of cure. It is, in fact, the only indication, except, of course, a clinical cure.

Until it can be shown that a person who has been completely sterilized of spirochetes (and who can prove that this has occurred?) still gives a positive Wassermann, a positive Wassermann test, no matter how delicate, is an indication of the probable presence of living spirochetes, and the patient should be treated on these grounds.

As far as I know, no syphilologist ever relied on a negative Wassermann test alone as a cure for syphilis, but insisted on a clinical cure also, or, perhaps better, insisted on a clinical cure plus a negative Wassermann. Instead of being no better off than the syphilologists of the pre-Wassermann day, we are infinitely better off, particularly since the work of Wile and Hasley has shown us that the Wassermann test performed by the ice-box incubation is more delicate in detecting the "Wassermann bodies" following intensive therapy than were the older methods. In other words, we are going to keep more uncured syphilitics under treatment, or at least under close surveillance than we formerly did.

Loyd Thompson, M.D., Hot Springs, Ark.

PREVENTION OF RELAPSES IN CASES OF ARRESTED TUBERCULOSIS

To the Editor:—Since the publication of my article on the "Prevention of Relapses in Cases of Arrested Tuberculosis Among Soldiers" (The Journal, Feb. 22, 1919, p. 539), I have delivered addresses on this subject on a lecture tour extending from the Atlantic to the Pacific. I received many suggestions and criticisms in the discussions which followed the reading of my paper as well as in letters. I desire to reply to the most important criticism, which is in reference to respiratory exercises.

The thought was expressed by a number that respiratory exercises would stimulate the tuberculous process to greater activity. Another criticism was to the effect that a mistake might be made by the less experienced clinician in declaring a case arrested when in reality it was still active. To these criticisms I would reply that I was not prescribing respiratory exercises for the tuberculous patient, but for the cured individual whose tuberculous process had been arrested. But I failed to point out in my lecture the inestimable advantage to be gained by letting the patient take gradual breathing exercises before allowing him to resume physical labor of any kind. Relapses occur frequently in certain cases in which the physical examination does not reveal any activity and there are no symptoms. The patient is pronounced an arrested case and allowed to leave the sanatorium. Yet he relapses after a few days or a week of physical labor. I believe we have all made mistakes in allowing patients to go to work too soon. But now, instead of telling the patient to go to work as soon as all the active symptoms have quieted down and only the physical signs of an arrested case remain, I start gradual breathing exercises and the patient is examined frequently, so as to determine whether or not an activity is reawakened. After from four to six weeks' preparation by massage, hydrotherapy, and respiratory therapy, when frequent examinations do not reveal any renewed activity, we may be reasonably certain that the disease is sufficiently arrested to allow the patient to resume physical labor with safety.

As long as the patient is on the reclining chair, he breathes but little and very quietly. Any physical exertion or labor will accelerate the respiratory movements, and it would seem unwise to allow his respiratory system to be submitted brusquely to so great a change as is inevitable when the patient begins to do physical labor which cannot be regulated, particularly when he is away from the sanatorium. Even for graded labor, which is of inestimable advantage, the careful preparation by breathing exercises is a valuable and safe procedure, because the patient can begin very slowly while yet on the reclining chair.

S. Adolphus Knopf, M.D., New York.

Queries and Minor Notes

Anonymous Communications and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

REQUIREMENT AS TO HOSPITAL RECORD UNDER HARRISON LAW

To the Editor —Please render an opinion on the following matter: A and B are regularly licensed physicians patronizing the same hospital. A contends that each time he instructs a nurse to give a hospital patient a hypodermic injection of morphin, or any other drug coming under the Harrison Narcotic Act, he should leave not only a written and signed order but should place after his signature his registration number. B says that it is unnecessary to add the registration number to the signature each time.

W. B. T., Texas.

Answer.—According to Internal Revenue Regulations No. 35, regarding hospital records, "No special form of record is required, but it (the record) must enable an inspecting officer to quickly ascertain the quantity and kind of narcotic drugs used and show the names and addresses of patients to whom administered and indicate the authority for such administration. The initials of a physician giving directions for the administration of a narcotic should appear on the chart of the patient, or separate prescriptions should be required by the pharmacist in charge of the drug room before the narcotics leave his possession." From this ruling it would appear that it is optional with hospitals whether they require each order for hypodermics to be initialed by the physician or separate prescriptions to be written for file in the drug room. If the first plan is followed, the initials of the physician are sufficient. His full signature and registration number are not necessary. If the second plan is followed, then the prescriptions must show the name and address of the patient, the date and name and address of the physician, and his registry number.

DECORATIONS THAT MAY BE WORN BY THOSE ENGAGED IN THE PRESENT WAR

To the Editor:—With the exception of medals bestowed for acts of bravery, there seems to be a lack of information on the subject of medals, buttons, bars, etc. Will you please publish a list of decorations that overseas men are entitled to have and to wear; also a list of the decorations to which discharged soldiers who did not go overseas are entitled? How are such victory medals, service medals, bars, etc., procured—by purchase or as a gift from the government?

L. A. Denis, M.D., West Hoboken, N. J.

Answer.—G. O. No. 48, War Department, April 9, 1919, is all that has been published on the subject of medals and ribbons for the present war. This order provides that a war service medal, to be known as the Victory Medal, will be awarded to all officers and enlisted men who served on active duty in the Army of the United States at any time between April 6, 1917, and Nov. 11, 1918, and whose service was honorable. Battle clasps will be awarded to officers or enlisted men who have actually participated under orders in the following engagements: (*a*) Somme, defensive, between March 21 and April 6, 1918. (*b*) Lys, between April 9 and April 27, 1918. (*c*) Aisne, on the Chemin des Dames and northeast of Rheims between May 27 and June 5, 1918. (*d*) Montdidier-Noyon, between June 9 and June 15, 1918. (*e*) Champagne-Marne, between July 15 and July 18, 1918. (*f*) Aisne-Marne, between July 18 and Aug. 6, 1918. (*g*) Somme, offensive, between Aug. 8, and Nov. 11, 1918. (*h*) Oise-Aisne, between Aug. 18 and Nov. 11, 1918. (*i*) Ypres-Lys, between Aug. 19 and Nov. 11, 1918. (*j*) St. Mihiel, between Sept. 12 and Sept. 16, 1918. (*k*) Meuse-Argonne, between Sept. 20 and Nov. 11, 1918. (*l*) Vittorio-Veneto, between Oct. 24 and Nov. 4, 1918.

Clasps will be awarded to each officer and enlisted man who served overseas and is not entitled to a battle clasp under paragraph 2, for service in France between April 6, 1917, and Nov. 11, 1918; for service in Italy between April 6, 1917, and Nov. 11, 1918; for any service in Siberia; for any service in European Russia, and for service in England between April 6, 1917, and Nov. 11, 1918.

A bronze star, three-sixteenths inch in diameter, will be placed on the service ribbon for each battle clasp awarded. When an officer or enlisted man has been cited in orders issued from the headquarters of a force commanded by a general officer for gallantry in action not justifying the award of a medal of honor, distinguished-service cross, or distinguished-service medal, he will wear a silver star for each such citation.

Pending the procurement and issue of the Victory Medal, organization commanders are authorized to permit those serving under them to wear the service ribbon and stars to which they are entitled as shown by their records.

The War Department has also issued a circular concerning victory buttons. A lapel button to be known as the Victory Button, for wear on civilian clothes, will be issued to all officers, enlisted men, field clerks and members of the Army Nurse Corps who served honorably on active duty in the Army of the United States for a period of fifteen days at any time between April 6, 1917, and Nov. 11, 1918. The button will be of silver for those wounded in action and bronze for all others.

The various medals, battle clasps, bronze stars, ribbons and Victory Buttons mentioned are not as yet ready for issue and will not be for some time, nor have instructions been issued as to how such decorations are to be distributed when available. When the decorations are ready for issue and instructions regarding such issue have been promulgated, the matter will be given wide publicity in the press.

PRESCRIBING ALCOHOL—PAREGORIC NOT INCLUDED UNDER NARCOTIC ACT

To the Editor —1. Is there a new law preventing a physician from prescribing absolute alcohol for medical purposes? 2. Is it necessary to put a registry number on a prescription containing camphorated tincture of opium?

F. E. Dostal, M.D., Chicago.

Answer.—1. No. 2. No.

"INTERCOSTAL PAIN FOLLOWING HERPES ZOSTER"

To the Editor —The question asked by J. W. W. regarding the treatment for severe intercostal pain following herpes zoster (The Journal, May 31, 1919, p. 1635) leads me to write of the experience I had with this condition four years ago. A woman suffered from this condition for a period of four or five months. She was more than 70 years old, and all remedies used were of no avail. She was constantly kept under the influence of opiates. Examination revealed no signs of cord lesion. It occurred to me that injection of alcohol into the region of the posterior root ganglion might be tried. This was done. For nearly twenty-four hours the pain was intensified, and then suddenly disappeared, the patient remaining well until about three years ago, when she died.

This method, if carefully done, is probably without any particular danger. The plexus surrounds this ganglion, and the aim should be, as happened in this case, to strike this plexus, drawing back on the piston of the syringe and obtaining blood. This shows that the region of the ganglion has been reached. The needle is withdrawn slightly and the injection made. I used in this particular case 2 c.c. of 80 per cent. alcohol. In such a painful condition this treatment might be worth trying before surgical methods are resorted to.

S. R. Salzman, M.D., Toledo, Ohio.

A Lesson of the War.—We all hope that we are done with war and with soldiers, at least for a generation. We can, however, derive certain broad lessons applicable to the conditions of peace from the experiences and intense activities of war, when almost unlimited funds were obtainable for research and the experiences ordinarily scattered over years were crowded into a few months. One of these lessons is that scientific men need to develop the capacity to become heads of large enterprises without ceasing to be scientific, without degenerating, as is too often the case, into the superclerk, who seems to be the American ideal of the high executive official. It is not enough for the scientific man to become the expert adviser to the unscientific administrator. If the latter has the *responsibility* he will use his power as he and not as the scientific man sees fit.—Yandell Henderson, *Science,* May 9, 1919.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama: Montgomery, July 8. Chairman, Dr. S. W. Welch, State Capitol, Montgomery.

Arizona: Phoenix, July 1. Sec., Dr. Allen H. Williams, 219 Goodrich Bldg., Phoenix.

California: San Francisco, June 23-26. Sec., Dr. Charles B. Pinkham, 904 Forum Bldg., Sacramento.

Colorado: Denver, July 2. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.

Connecticut: New Haven, July 8-9. Sec., Regular Bd., Dr. Charles A. Tuttle, 196 York St., New Haven; Sec., Homeopathic Bd., Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven; Sec., Eclectic Bd., Dr. James E. Hair, 730 State St., Bridgeport.

District of Columbia: Washington, July 8-10. Sec., Dr. E. P. Copeland, The Rockingham, Washington.

Kentucky: Louisville, July 1-3. Sec., Dr. J. N. McCormack, Bowling Green.

Louisiana: New Orleans, July 1-3. Sec., Dr. E. W. Mahler, 141 Elk Place, New Orleans.

Maine: Augusta, July 1-2. Sec., Dr. Frank W. Searle, 776 Congress St., Portland.

Massachusetts: Boston, July 8-10. Sec., Dr. Walter P. Bowers, State House, Boston.

Mississippi: Jackson, June 24-25. Sec., Dr. W. S. Leathers, University.

Nebraska: Lincoln, June 30-July 2. Sec., Dr. H. J. Lehnhoff, 514 First National Bank, Lincoln.

New Mexico: Santa Fe, July 14. Sec., Dr. R. E. McBride, Las Cruces.

New York: Albany, Buffalo, New York and Syracuse, June 24-27, Mr. George M. Wiley, director, Exam. and Inspections Div., State Edu. Bldg., Albany.

North Carolina: Raleigh, June 23. Sec., Dr. H. A. Royster, 423 Fayetteville St., Raleigh.

North Dakota: Grand Forks, July 1-4. Sec., Dr. G. M. Williamson, 860 Belmont Ave., Grand Forks.

Oklahoma: Oklahoma City, July 8-9. Sec., Dr. J. J. Williams, Weatherford.

Oregon: Portland, July 1-3. Sec., Dr. Frank W. Wood, 559 Morgan Bldg., Portland.

Pennsylvania: Philadelphia and Pittsburgh, July 8-10. Sec., Nathan C. Schaeffer, State Capitol, Harrisburg.

Rhode Island: Providence, July 10-11. Sec., Dr. B. U. Richards, State House, Providence.

South Dakota: Deadwood, July 8. Sec., Dr. P. B. Jenkins, Waubay.

Texas: Austin, June 24-26. Sec., Dr. M. F. Bettencourt, Mart.

Utah: Salt Lake City, July 7-8. Sec., Dr. G. F. Harding, 407 Templeton Bldg., Salt Lake City.

Vermont: Burlington, June 26-28. Sec., Dr. W. Scott Nay, Underhill.

Washington: Seattle, July 1-3. Sec., Dr. C. N. Suttner, 415 Old National Bank Bldg., Spokane.

West Virginia: Huntington, July 8-10. Sec., Dr. S. L. Jepson, Masonic Bldg., Charleston.

Wisconsin: Milwaukee, June 24-26. Sec., Dr. J. M. Dodd, 220 E. 2nd. St., Ashland.

Wyoming: Cheyenne, June 23-25. Sec., Dr. H. E. McCollum, Laramie.

REGULATIONS GOVERNING MEDICAL PRACTICE IN AUSTRALIA AND NEW ZEALAND

New South Wales.—The candidate for registration is required to communicate with the secretary of the Medical Board of New South Wales, Sydney, at least five days before a monthly meeting, which is held on the second Wednesday in every month, and to submit his diploma or other certificate of qualification. The candidate is required to prove to the satisfaction of the board: (1) that he is a doctor or bachelor of medicine of some university, or a physician or surgeon licensed or admitted as such by some college of physicians or surgeons in Great Britain or Ireland; or (2) that he has passed through a regular course of study of not less than five years' duration in a school of medicine, and that he has received from some university, college or other body duly recognized for that purpose in the country to which such university, college or other body may belong, a diploma, degree or license entitling him to practice medicine in that country; or (3) that he is a member of the Company of Apothecaries of London or of the Apothecaries' Hall, Dublin; or (4) that he is a medical officer of His Majesty's sea or land service, or (5) that he is a person placed on the separate register under Section 8 of the Act (Nov. 29, 1912). The penalty for using the title of physician, Doctor of Medicine, Licentiate in Medicine and Surgery, or Bachelor of Medicine is about $250, and in case of continuing offense, $25 a day from the date of the first offense or imprisonment for a term not exceeding twelve months.

Queensland.—The candidate for registration must submit his diploma or other certificate for approval to the Medical Board of Queensland, at Brisbane. The board meets on the first Thursday of every month. A candidate must have passed through a regular course of medical study in a school of medicine and received from some college, university or other body, duly recognized for that purpose in the country to which such university, college or other body may belong, a diploma or license entitling him to practice medicine in that country, or must be a person who is, or has been, a medical officer, duly appointed and confirmed, of His Majesty's sea or land service. In dealing with diplomas and certificates of qualification, the essential point is that the board must be satisfied. The penalty is similar to that of New South Wales.

South Australia.—Any person who wishes to be registered as a medical practitioner must give to the secretary of the Medical Board of South Australia, Adelaide, at least three days' notice of his intention to apply. This board meets on the second Thursday in every month. He must submit his diploma and produce a declaration, signed before a justice of the peace, to the effect that he is the person whose name appears on the diploma. The fee for registration is about $5. The applicant must have a medical degree, diploma or license to practice, granted by a university, college or licensing body of any British colony or possession or by any foreign university, college or licensing body which in the opinion of the medical board is equal to the qualification entitling the holder to be registered in the United Kingdom. He must satisfy the board that he has passed through a regular graded course of medical study of not less than four years' duration in a British or foreign school of medicine, and has received from such college, school or university or body duly recognized for that purpose in the country to which such institution may belong, a medical diploma or degree certifying to his ability to practice.

Tasmania.—No one is deemed a legally qualified medical practitioner who is not the holder of a certificate of qualification from the Medical Council of Tasmania, Department of Public Health, Hobart, Tasmania. Applicant shall present to the council (which meets on the first Tuesday in each month) the testimonium, diploma, license or certificate from some university, college or other body duly recognized for such purposes in the country to which such university, college or other body may belong. Subject to the foregoing qualifications, the council may register duly certified holders of British registrable degrees. The registration fee is about $15.

Victoria.—The office of the Medical Board of Victoria is the Chief Secretary's Department, Spring Street, Melbourne, Victoria, and the monthly meeting for registration takes place on the first Tuesday of every month. To be entitled to registration, an applicant must have passed through a regular course of medical and surgical study of five or more years' duration. Persons holding British registrable degrees may be registered. No university or college or other body in any country other than the United Kingdom or a British possession is recognized by the board unless registered legally qualified medical practitioners of Victoria are, by virtue of being so registered, and without further examination, entitled to practice their profession in such country, either on registration or otherwise. The fee for registration is about $15. The penalty is similar to that of New South Wales.

Western Australia.—Applicants must submit their degrees, diplomas, certificates or other proofs to the Medical Board of Western Australia, Public Health Department, Perth, West Australia, together with proof of good character and qualification, skill, and ability to practice medicine or surgery. Only persons holding British, Australian, Tasmanian or New Zealand qualifications and those holding the registration certificate of the General Medical Council of Great Britain can be registered.

New Zealand

In order to be registered the applicant must cause at least one month's notice of his intention to apply to be published in the *Gazette,* and also in some newspaper circulating in the district in which the applicant intends to practice; and at least one month before the date of his application for registration he must deposit his diploma or other evidence of qualification, or a true copy thereof certified as correct, in the office of the registrar nearest to the place where he intends to register. The applicant may then apply to the registrar-general, Wellington, New Zealand, for registration, forwarding with his application a copy of the advertisement and *Gazette* notice. The applicant must satisfy the board that he is (1) a graduate in medicine and surgery of the University of New Zealand; or (2) registered on the register of medical practitioners in the United Kingdom; or (3) eligible for registration on such, or (4) the holder of a diploma approved by the board. The board may refuse to approve any diploma unless the graduates in medicine and surgery of the University of New Zealand are by virtue of such graduation, and without further examination, entitled to be registered in the country in which is situated the university or other institution by which this diploma has been granted. No person is entitled to be registered if he has been convicted of any offense punishable by imprisonment with hard labor for a term of two years or upward or is otherwise not of good character.

A fee of about $15 is payable when the diploma or other evidence of qualification is deposited. There is a slight charge for a certificate of registration or for alteration or addition to qualifications to register. The act took effect, March 1, 1915.

New Mexico January Examination

Dr. W. E. Kaser, secretary of the New Mexico Board of Health and Medical Examiners, reports that 7 candidates were licensed on credentials and 1 candidate was licensed through reciprocity, at the meeting held at Sante Fe, Jan. 13-14, 1919. The following colleges were represented:

College	LICENSED ON CREDENTIALS	Year Grad.	No. Licensed
Rush Medical College		(1906)	1
Kansas City Medical College		(1895) (1903)	2
Willamette University		(1907)	1
Medical College of Ohio		(1900)	1
Western Pennsylvania Medical College		(1901)	1
Vanderbilt University		(1900)	1

College	LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
University of Arkansas		(1916)	Arkansas

Colorado April Examination

Dr. David A. Strickler, secretary of the Colorado State Board of Medical Examiners, reports the written examination held at Denver, April 1, 1919. The examination covered 8 subjects and included 80 questions. An average of 75 per cent. was required to pass. Of the 16 candidates who took the physicians and surgeons examination, 14, including 8 osteopaths, passed and two osteopaths failed. Seventeen candidates were licensed through reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Hospital College of Medicine, Louisville		(1901)	80.6
Eclectic Medical University		(1910)	75
Washington University		(1918)	82.3
Jefferson Medical College		(1915)	87.2
Vanderbilt University		(1916)	80.6
University of Tennessee		(1912)	80.3

College	LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
College of Physicians and Surgeons, Chicago		(1902)	Illinois
Keokuk Medical College		(1898)	Illinois
Tulane University		(1912)	Louisiana
University of Maryland		(1915)	Washington
University of Michigan Homeo. Medical College		(1906)	Michigan
College of Physicians and Surgeons, St. Louis		(1897)	Missouri
University Medical College		(1897) Iowa; (1903)	Kansas
University of Kansas City		(1884)	Missouri
Washington University		(1917)	Missouri
John A. Creighton Medical College		(1901)	Nebraska
Bellevue Hospital Medical College		(1889)	Iowa
Western Reserve University		(1905)	Ohio
Tennessee Medical College		(1894)	Kansas
University of Nashville		(1907)	Tennessee
Baylor University		(1909) Texas; (1916)	Texas

Book Notices

Human Infection Carriers: Their Significance, Recognition and Management. By Charles E. Simon, B.A., M.D., Professor of Clinical Pathology in the University of Maryland School of Medicine and the College of Physicians and Surgeons, Baltimore, Maryland. Cloth. Price, $2.25. Pp. 250, with illustrations. Philadelphia: Lee & Febiger, 1919.

This book gives the impression that it has been written rather hurriedly, the consequence being that while many facts in regard to human infection carriers are included, yet the book does not constitute a well digested and thorough summary of our present knowledge of this subject. The use of the terms "active" and "passive" carriers, to denote that in one case the carriers have actually been infected with the germs in question and that in the other the germs have played a purely passive rôle, seems unfortunate because the impression may be conveyed that the carrier himself may be active or passive. In the chapter on carriers in epidemic meningitis, no reference is made to the standard technic of meningococcus carrier detection adopted by the medical departments of the United States Army and Navy and by the United States Public Health Service, and which represents an earnest effort to formulate a satisfactory technic for general practical use. The chapter on influenza proceeds as if the Pfeiffer bacillus had been accepted definitely as the cause of a certain type of pandemic influenza. It is remarkable that in a book published in 1919 the only reference to the literature on influenza should be to German contributions. In fact, in connection with no disease discussed in this book does it appear that the literature has been studied thoroughly and systematically; and yet to know what has been done in any field will ever be the only basis for a satisfactory presentation of the problems of that field. American medicine would be held in greater respect if hastily prepared books with little evidence of scholarship were not published.

Aspect of Death and Correlated Aspects of Life in Art, Epigram, and Poetry. Contributions Towards an Anthology and an Iconography of the Subject. Illustrated Especially by Medals. Engraved Gems, Jewels, Ivories, Antique Pottery, etc. By Frederick Parkes Weber, M.A., M.D., F.R.C.P. Third edition. Cloth. Price, $7.50 net. Pp. 786, with 145 illustrations. New York: Paul B. Hoeber, 1918.

This edition of a most interesting work has been greatly enlarged and thoroughly revised. It is a veritable anthology of death, the author having gathered together all that is beautiful, romantic, witty, humorous, pessimistic or artistic concerning the end of human life. Peculiarly, the book is not pessimistic in tone, but gives the distinct impression that mankind in mass has ever viewed death philosophically. The book contains thousands of quotations from literature and more than one hundred interesting illustrations. The reader, in fact, is left with the impression given by the old English couplet

> To look on life with placid eye,
> And neither fear nor wish to die.

War Surgery of the Face: A Treatise on Plastic Restoration after Facial Injury. By John B. Roberts, A.M., M.D., F.A.C.S., Professor of Surgery in the University of Pennsylvania Graduate School of Medicine. Prepared at the Suggestion of the Subsection on Plastic and Oral Surgery Connected with the Office of the Surgeon General. Cloth. Price, $4.50. Pp. 442, with 256 illustrations. New York: William Wood & Co., 1919.

The author has endeavored to correlate the literature arising from the experiences of general and oral surgeons in the army and navy services of the various nations recently at war, adding to this material the results of civil practice in traumatic surgery of the face. The book is therefore of decided interest in the field of industrial surgery, since reparative surgery of the face following wounds received in warfare is identical with the treatment of wounds caused by industrial accident. The work is divided into three parts, the first part consisting of a comprehensive outline of the surgical anatomy of the face. The pathology and treatment of facial wounds of every description is considered in the second part. The third part takes up the reconstructive treatment of war injuries of the face. The book completely covers the field of war or accidental surgery, and is readable and instructive.

Vital Statistics: An Introduction to the Science of Demography. By George Chandler Whipple, Professor of Sanitary Engineering in Harvard University. Cloth. Price, $4. Pp. 517, with illustrations. New York: John Wiley & Sons, Inc., 1919.

This text has been prepared by the author especially for students in courses on public health. It tells what statistics are, how to express vital facts by figures, how to tabulate them, how to compute birth rates and death rates, how to adjust and standardize death rates, and how to make life tables. It contains also the international list of causes of death and an excellent table of logarithms for making computations. This book shows why figures sometimes lie and also tells the reader how to tell which figures lie and which figures tell the truth. The text is very fully illustrated with numerous diagrams, charts and tables. While not strictly a medical book, this handbook is one which every physician who is at all interested in public health will find of particular value.

Medicolegal

Board of Health Closing Schools for Influenza

(Globe School District No. 1 v. Board of Health et al. (Ariz.), 179 Pac. R. 55)

The Supreme Court of Arizona affirms a judgment in favor of the defendants in this action, wherein the plaintiff board of school trustees of the school district of the city of Globe sought to enjoin the local city board of health and the city officers from enforcing a health order or regulation closing the schools during the epidemic of Spanish influenza. The court holds that the measure adopted by the local board of health, closing the schools of the Globe school district, was, at the time adopted, a valid, enforceable order and regulation for the purpose of reasonably protecting the public health, under the statutory authority to make and enforce all needful rules and regulations for the prevention and cure, and to prevent the spread of any contagious, infectious, or malarial disease among persons; that during the existence of said Spanish influenza in epidemic form in said community said regulation was binding on the educational administrative officers, and continued binding so long as such epidemic continued in such form, and no longer.

The court says that to concede that any board of health has been delegated the legislative power to declare what is or what is not a nuisance is to concede that boards of health may be delegated legislative power, and this cannot be done. Such boards of health may abate nuisances, and in so doing, if they mistake that for a nuisance which is not in fact a nuisance, then the board acts without jurisdiction, because the existence of a nuisance in fact gives the board the power to act. No portion of the health laws of Arizona attempts to or could grant to health boards the authority to arbitrarily declare a given condition a nuisance. An attempt by such board to declare what is or what is not a nuisance is futile, null and void. Therefore, that portion of the resolution of the defendant board of health which attempted to define nuisances, and which declared certain assemblies, including school sessions, nuisances, was without authority of law and of no force or effect.

But the material thing here was the order closing the schools; and it seems clear to the court that the statute and the public exigency were sufficient to justify the order of the local board of health prohibiting the educational officers from holding sessions of school. But the exigency is met and satisfied by the disappearance of the infectious or contagious disease. As a matter of police regulation, the authority of the board of health over the schools ends with the necessity of the regulation. The court has found no adjudicated case that denies the power of public bodies exercising the authority of supervising the public health, such as boards of health established by the laws of Arizona, to make a valid order closing schools at times when infectious or contagious disease is epidemic in the community, as was admittedly the situation at Globe when the orders here in question were made. The court does find, on the other hand, cases wherein the courts treat, as a matter of course, the right of health officers to close schools at times of such emergency.

While school trustees and educational administrative officers are invested with power to establish, provide for, govern, and regulate public schools within their respective jurisdiction, they are in these respects nowise subject to the direction or control of the state or county or city boards of health, yet when the necessity arises to close the schools for the protection of the public health such emergency, while it exists, is a superior power to that given the school administration officers, and the law of necessity controls the situation during the existence of the emergency giving rise to the power. And while local boards of health are no authority conferred on them to legislate, they are granted power within their jurisdiction to make rules and regulations to facilitate the enforcement of the health laws, and in exercising such powers they may adopt such measures as are reasonable to carry out such health laws according to the true spirit and intent of the legislature.

Physician Contracting for Salary and Employer Fees

(Sherrill v. Union Lumber Co. (Texas), 207 S. W. R. 149)

The Court of Civil Appeals of Texas affirms a judgment in favor of the defendant company, which was sued by the plaintiff, a physician, for $1,753 which he claimed was due him for medical treatment rendered to injured employees of the company during the first week of their injuries, in accordance with the workmen's compensation act of the state, notwithstanding an alleged contract between him and the company that he should receive a salary or designated compensation for his services, leaving for the company the medical fees which should be paid by the insurer carrying the risk on the employees for medical services rendered during the first week of their injuries. The court says that if, as was substantially found by the jury, the plaintiff, on entering the employ of the defendant as a physician at its mill plant, entered into an agreement or understanding with the defendant to the effect that he should be paid a certain cash compensation for his services in treating the employees of the millyard, with the further understanding or agreement that he would forbear to claim the fees for which the insurer might become liable to him for his services to injured employees during the first week of injuries, under the workmen's compensation act of the state then in effect (Act of 1913), and, further, that such fees might be collected and retained by the defendant, then the court can see no reason for holding that such contract was in violation of the public policy of the state, and it therefore declines to so hold. But if the court is wrong in this view of the question, and if the necessary tendency of such contract was vicious and against sound public policy, still there would be a serious question as to whether the court ought to sustain the plaintiff's assignment of error on this point, for the reason that if the contract was made he was undeniably a party to it, and if the same was vicious, and necessarily tended to injure the public generally, or any class or members of the public, or was against the public welfare in any respect, and therefore against sound public policy, then it must be admitted that the plaintiff was in pari delicto or equal legal fault with the defendant in entering into the contract. It seems to the court that the plaintiff should not be permitted to profit by the contract to the extent of receiving and retaining the compensation that was allowed him by the defendant under its terms, and at the same time repudiate that portion of the contract which gave to the defendant the right to collect and retain the fees paid by the insurer, and which were held by the defendant under the terms of the claimed contract. If it should be held that the plaintiff could assail this contract so far as it permitted the defendant to have and receive the money to be paid by the insurer on the ground of public policy, then it would be to hold, in effect, that the plaintiff might take advantage of a vicious and illegal contract to which he was undeniably a party, so far as it was beneficial or favorable to him, and repudiate it in all respects where not so. For this reason alone the court would be inclined to overrule the assignment of error, even if it were of the opinion that the tendencies of the contract were such as to make it against public policy.

Unnecessary Roentgenoscopy Not Required

(United States Fidelity & Guaranty Co. et al v. Wickline (Neb.), 170 N. W. R. 193)

The Supreme Court of Nebraska holds that a claimant for compensation under the employers' liability act pursuant to Section 3675 of the Revised Statutes of Nebraska of 1913, cannot be denied a recovery because of a refusal to submit to a roentgen-ray examination or to have a roentgenogram taken of the person, where the uncontradicted evidence shows that neither was necessary. Section 3675 provides that, after an employee has given notice of an injury he shall, if so requested by the employer or the insurance company carrying such risk, submit himself to an examination by a physician or surgeon furnished and paid for by the employer or the insurance company, and refusal of the employee to submit to such examination shall deprive him of the right to compensation during the continuance of such refusal. The court says that under the statute the request for an examination must be reasonable, and it did not appear to have been in this case. The testimony before the court showed affirmatively that neither a roentgen-ray examination nor a roentgenogram was necessary. No physician nor other person testified that either was necessary, nor did it appear that a request was made to the court to require the employee to submit to either. In the present advanced state of the science of roentgen-ray examinations and the taking of roentgenograms of the person there appears to be no reason why such examination or roentgenogram should not be permitted by a claimant for compensation under the employers' liability act, on request by the employer or insurer, unless the request is shown to be unreasonable.

Liability of Physicians and Manufacturer of Ether

(Moehlenbrock v. Parke, Davis & Co. et al. (Minn.), 169 N. W. R. 541)

The Supreme Court of Minnesota affirms an order denying the defendant company's separate motion for either a judgment in its favor or a new trial, in this action against two physicians and the company to recover damages for the death of one Moehlenbrock, in which a verdict was returned in favor of the plaintiff, as administrator, against all of the defendants. The court says that Moehlenbrock, a man 21 years old, robust and apparently in good health except for diseased tonsils, died just after being operated on for the removal of his tonsils. One of the defendant physicians operated, and the other administered the anesthetic, using a brand of ether manufactured by the defendant company. While the ether was being given, it was noticed that the patient became cyanotic, and it was necessary to stop and revive him to some extent before proceeding. After the tonsils were removed, he lapsed into the same condition several times, and finally, within about three hours from the commencement of the operation, all efforts to revive him failed and he died.

The plaintiff claimed that the physicians contributed to the fatal result by their negligence in the administration of the ether, and that the company also contributed thereto by its negligence in manufacturing and placing impure and dangerous ether on the market for anesthetic purposes. Under the charge thus made, of distinct and differing acts of negligence concurring to bring about Moehlenbrock's death, the physicians and the company were placed in a peculiar antagonistic position. For, in addition to other defenses, it was a good defense for the physicians to show that the fatal outcome was due wholly to impurities in the ether, a defect they could not anticipate; and for the company to show the carelessness of the physicians as the sole cause. That made the defendants, in a measure, adverse parties to each other; and because of such antagonistic positions the company was accorded a wide range in cross-examining the physicians, even though called by the plaintiff for cross-examination.

Complaint was made of rulings allowing the defendant physicians to express an opinion as to the cause of death, confirmed, as they admitted it was in part, by information acquired afterward, concerning an analysis of ether made by a chemist; but the court thinks there was no error here. As professional men, the physicians were competent to express an opinion as to the cause of death. The value of that opinion was for the jury; they determining whether the physicians were justified in relying, for corroboration of the opinion expressed, on the presence in the ether as administered to Moehlenbrock of the impurities testified to by the chemist.

The identification of the ether analyzed as that administered to Moehlenbrock, and to another patient the next day, being sufficient, and the evidence sufficient that there had been no change in the condition of the ether during the twenty-four hours between the two operations, it would be proper, both for the experts and the jury, to consider the similarity of the effects of the ether on the two patients in determining the cause of death. It is common knowledge that human beings are physically sufficiently alike so that we may reason that when a drug or substance produces a marked effect on one person it will, to a certain extent, similarly affect another, taking into account age, strength and other conditions present. In fact, the healing art is largely predicated on this similarity of cause and effect in different persons.

The physicians were not the agents nor servants of their patient, so that their negligence could be considered his negligence, to be taken advantage of as a defense by one who, by an independent act of negligence, also proximately contributed to the injury. Nor was the company entitled to regard the operation as a joint enterprise on the part of Moehlenbrock and the physicians, so as to escape liability for its own negligence. In the actual conduct of the operation Moehlenbrock could take no conscious part. It was the joint enterprise of the physicians only.

It was not necessary to prove that the dangerous condition of the ether was known to the company. It was its duty to know that the article it placed before the medical profession did not contain dangerous and unsafe impurities, and was so put up that these impurities could not form in the container, when kept according to directions.

Admissibility of Evidence as to Operations in Hospitals

(Sparer v. Travelers' Insurance Co. (N. Y.), 173 N. Y. Supp. 673)

The Supreme Court of New York, Appellate Division, First Department, says that, in this action on a life insurance policy issued by the defendant on the life of one Sparer, who died in a hospital after an operation for cancer of the stomach, the defendant sought to prove by the operating and assistant surgeon at the hospital, and by the hospital records, the condition the insured was in at the time of the operation; but this was properly excluded under Section 834 of the Code of Civil Procedure, prohibiting disclosures by physicians and surgeons. However, the defendant then called a physician who at the time of the operation was a medical student and in that capacity attended the operation, and he was permitted to testify that when Sparer's body was exposed on the operating table he saw a scar on his abdomen and when the abdomen was opened it showed that an operation known as posterior gastroenterotomy had been performed. The defendant tried to put in evidence another hospital's record of the case, which, it is held, was properly excluded. But the court thinks it was erroneous to exclude an offer of proof by a surgeon that, at such other hospital, between certain dates, he performed an operation on the body of the insured. He could not have described the operation, or any condition that he observed which was necessarily disclosed by an inspection of the body of the insured; but he could have testified that he at a certain time performed an operation on the insured at the hospital.

Social Medicine, Medical Economics and Miscellany

Health and Hours of Labor

The human factor in industry is subject to certain limitations. One of these is that a man or a woman cannot work continuously to good effect except within limits. Beyond a certain number of hours of work in a given day a worker's efficiency and production rate decrease. Long hours maintained for weeks or months impair the health of the worker. The day's work may be so long or so arduous that the worker does not have time or energy to devote to cultural, recreational or family interests. These are facts concerning which there is more or less general agreement.

How many hours shall constitute a day's work, considered in the interests of health and efficiency, is not easy to determine. Industry, interested primarily in production, would regulate hours in relation to output. This does not mean that individual employers and firms are not sometimes prompted by humanitarian motives in matters relating to the welfare of their employees. Yet in general the attitude of industry toward measures for the promotion or protection of the health and comfort of workers seems to depend on the relation of these measures to efficiency and cost of production. Studies have been made in various industries to determine what should be the standard work day or work week.

An investigation made in the silk manufacturing industry by the National Industrial Conference Board has shown that, as a whole, maximum output lies at some point between fifty and fifty-four hours a week. Similar studies made in the cotton manufacturing and the wool manufacturing industries indicates that the point of maximum production falls below a fifty-four hour week. As to health, there was found no perceptible difference between the health of employees who worked fifty hours a week and that of those who worked fifty-two or fifty-four hours. Public interest in the length of the work day or the work week lies chiefly in the relation between the hours of work and the health of the worker. The maximum number of hours which an individual may work per day or per week without endangering health depends largely on the age and sex of the worker and the character of the work. Little effort has been made to regulate by law the length of the working day of men except in certain industries and as regards overtime. Two states, Oregon and Mississippi, have ten hour laws for male workers in most industrial employment. In all but one or two states, the hours of child workers between the ages of 14 and 16 or 17 are regulated by law. Thirty-eight states (including the District of Columbia) have laws regulating the length of the work day and the work week of women. In seven states there is an eight hour day; in eleven states a nine hour day; in twenty, a ten to eleven hour day. Two states make the maximum work week *forty*-eight hours; fifteen make it from fifty-four to fifty-five hours; eleven make it from fifty-six to fifty-seven hours; eight, from sixty to sixty-three hours, and two permit a seventy hour week. Fifteen states regulate night work of women, ten prohibiting it altogether.

In Illinois, which now has a ten hour law for women workers, a state commission headed by Dr. James B. Herrick has recently made a study of the relation between hours and health of women workers. A majority of the commission has reported in favor of an eight hour day and a forty-eight hour week and has recommended their establishment by law, such regulation to apply to all industries covered by the ten hour law now in force, "including all office workers and excepting graduate nurses" (Report of the Illinois Industrial Survey, December, 1918). The commission based its recommendations, so far as the health of employed women is concerned, on the fact that a longer day than eight hours and a longer week than forty-eight hours affect health primarily as they produce fatigue.

Fatigue is generally recognized as being the most important effect on the worker of either long hours or intensity of occupation. It may be considered in both its temporary and its cumulative effects. Temporary fatigue, by its effect on vision, hearing, attention, muscular control and reaction rate, tends to lessen production and to increase the danger of accidents. Cumulative fatigue frequently results in illness, with resultant absence from work and attendant loss to both employer and employee. Investigations of the effect of rest periods in reducing temporary fatigue and preventing cumulative fatigue (as reported in Rest Periods for Industrial Workers, Report of National Industrial Conference Board, January, 1919) lead to the conclusion that for certain occupations short rest periods of from five to fifteen minutes in the middle of both the forenoon and the afternoon may be beneficial to the health of the employee and tend to increase his production.

International Red Cross Conference

Representatives from the Red Cross societies of the United State, France, Great Britain, Italy and Japan met at Cannes (France) in April to propose to the Red Cross organizations of the world an extended program of future activities in the interest of humanity. One of the delegates of the Red Cross of Great Britain was Sir Arthur Newsholme, K.C.B., M.D. At a meeting held May 2 at the national headquarters of the American Red Cross in Washington, D. C., Sir Arthur reported briefly on what was done at the Cannes conference.

The conference held a number of general meetings in which the general policy to be pursued was discussed and then divided itself into sections dealing with the following subjects: preventive medicine, child welfare, tuberculosis, malaria, venereal diseases, nursing, information and statistics. These sections were not selected as covering the entire ground of preventive medicine, but as forming branches of work in which early investigation and action appeared to be most desirable. The conference agreed that the new work of the Red Cross would naturally divide itself into two parts: an international bureau and national organizations. The international bureau, in the scheme proposed for the consideration of the conference—which received general approval—would act as a great center for collecting information on various public health subjects, and for digesting it and subsequently distributing it by means of special publications, or periodical journals, or on application from those requiring specialized information. It would also act as a means of educating the general public on urgent problems affecting its welfare; and it would be utilized as a center, organizing in less favored communities missions which would undertake local investigations and remedial work. These surveys and activities would be intended rather as demonstration centers than as permanent organizations, the intention being to withdraw them as soon as the necessary work could be carried on by local Red Cross or other organizations.

It was suggested that the central bureau should comprise a number of branches dealing with epidemic diseases, tuberculosis, venereal diseases, child welfare, nursing and other subjects, collating and analyzing information and distributing it through the medium of the national Red Cross of each country. Such a central bureau will be of the greatest value to all social and public health workers, while not clashing with any existent agency. The relation of the central bureau to national Red Cross societies will be one of mutual cooperation. The central bureau will provide information and facilities for national work; the actual work will need to be carried out in each country nationally and in the main from funds supplied by that country. It is not intended that the National Red Cross shall undertake, much less compete with, work already being carried out either by local authorities or by existing voluntary associations.

Among the more urgent problems of preventive medicine, priority was given to advocacy of combined efforts for the prevention of the major pests of mankind, of the provision of laboratory assistance in the diagnosis of disease and in securing more accurate vital statistics and improvements in public health legislation. In child welfare work, the importance of health visiting, of child welfare centers, of an improved midwifery service and of continuous observation of children under school age as well as scholars was emphasized. In regard to tuberculosis, stress was laid on the essential point that measures against this disease must embrace the whole of the sick lifetime of the patient, and must include, when necessary, measures for obviating the results arising from the fact that the partially recovered patient commonly is unable to earn an economic wage. In the prevention of venereal diseases a similarly wide outlook was advocated, including the necessary social and moral as well as medical measures against their spread.

Inequality of the Pupils

The question of the meaning of inequality of the pupils is always being raised for diagnostic purposes, especially in affections of the thorax. According to many authorities, "inequality of the pupils is always pathologic"; but many observers are not so dogmatic, and admit that the condition occurs in from 1 to 10 per cent. of all cases.

In order to gain some idea of the frequency of this condition, T. Stewart Barrie examined, for this peculiarity, in the course of his work as an ophthalmic surgeon in the Glasgow recruiting area, the eyes of 326 men who had been sent for special examination. The results are given in the *British Medical Journal,* Nov. 9, 1918. Inequality of the pupils was found in thirty-five cases, a proportion of 10.73 per cent. In none of these cases was there any sign of ocular disease or manifestation of disease of the central nervous system. The pupils reacted readily to light, and the consensual and convergence reflexes were normal; in each case the inequality persisted in the contracted state.

The inequality in every case was indisputable, the difference between the diameters of the two pupils being from 1 to 2 mm. This difference is not large, but as pupils are compared by areas it was easier to note differences than to measure them. For example, pupils having diameters of 3 and 2 mm., respectively, have areas in the proportion of 9 and 4.

An analysis of these thirty-five cases gave the following results:

1. The left pupil was the larger in twenty-one cases, the right in fourteen.
2. The visual acuity without glasses was the same in ten cases; the right eye had the higher visual acuity in eight cases, the right pupil being the larger in four; the left eye had the higher visual acuity in seventeen cases, the left pupil being the larger in thirteen.
3. The refractive condition of the thirty-five cases was as follows:

Emmetropia	2
Hypermetropia	2
Hypermetropic astigmatism	2
Myopia	11
Compound myopic astigmatism	1
Mixed astigmatism	3
Anisometropia	9
Not recorded	5

The conclusions that may be drawn from this investigation are:

1. Inequality of the pupils is frequent.
2. It is associated with all refractive conditions, with a tendency to be more frequent in myopic conditions.
3. The visual acuity is not affected adversely by the fact that one pupil is slightly larger than the other.
4. The left pupil is more frequently larger than the right.
5. Inequality of the pupils occurs as a physiologic condition.

Tuberculosis Among Industrial Workers

The Medical Research Committee, London, England, has made a study of the effect of occupation on the morbidity and mortality of tuberculosis among industrial workers because of the increase in both, especially among women workers in munition factories (Special Report, Series 22, 1919). While the death rate among certain groups of occupations was unusually high as compared with other occupations, it was felt that it was not so much the occupation itself as the environment and poor hygiene which were responsible for the higher death rate. The incidence of the disease is still too heavy to be explained as a by-product of inferior physique independent of the factory environment itself. The data with regard to the women workers were too insufficient to permit of arriving at any satisfactory conclusions, but statistics from other countries, particularly Germany and Austria, where women have been engaged in heavy occupations for many years, show a higher incidence of tuberculosis among the workers, thus bearing out the observations made thus far in England. The greater incidence of tuberculosis among town dwellers could not be accounted for by the general lowering of health associated with living in cities, whereas industrial employment does account for such an increase because it introduces a special factor making for the development of tuberculosis. Special attention was paid by the committee to factory conditions and the observations made previously by other similar commissions were fully verified and confirmed. A very terse summary of the recommendations of the committee might be made as follows: Improve the hygienic conditions of factories; prevent overcrowding in industrial dwellings; take every precaution to remove and prevent the development of specific trade habits which favor the spread of tuberculosis from person to person; make every effort to enforce the measures of prophylaxis against the disease.

Discussions on Influenza in Japan

An occasional correspondent sends us from Japan the following report of several recent meetings devoted to discussions of the influenza epidemic:

Society of Internal Medicine of Japan.—At a recent meeting of this society, held in Kyotto, R. Miki stated his conviction that Pfeiffer's bacillus is the primary cause of the last influenza epidemic, and that diplococci occur as secondary invaders. Dr. Onodera laid stress on the meteorologic relation of the occurrence of influenza epidemics, the latter running parallel with the severe cold that returns at about thirty year intervals. Dr. Yabe has always found a diminished leukocyte count in cases of influenza. Dr. Tsuneoka found that the disease, as well as vaccine made from the Pfeiffer bacillus, confers immunity.

Society of Hygiene of Japan.—A meeting of this society was held in Tokyo, April 3. Dr. Ishiwara and his associates demonstrated the influenza bacillus in from 45 to 69 per cent. of all cases of influenza and in from 35 to 55 per cent. of the cases of measles, scarlet fever and diphtheria. Therefore, they do not believe that it is the specific cause of influenza.

Pathological Society of Japan.—At a recent meeting of this society, held in Kyoto, Dr. Katsurada stated his belief that the Pfeiffer bacillus is not the specific cause of influenza; nor is a filtrable virus. He has found a micrococcus, however, to which he ascribes an etiologic relationship to influenza.

Alumni Meeting of Kitasato Institute for Infectious Diseases.—At this meeting it was stated that the institute accepts Pfeiffer's bacillus as the cause of influenza and that immunized horse serum is a most efficacious remedy for the disease. An exotoxin produced by the bacillus has been isolated.

Standards for Milk and Cream

Food inspection decision 178, of the United States Department of Agriculture, issued April 17, 1919, promulgates the following definitions and standards for milk and cream, as adopted by the joint committee on definitions and standards July 30, 1917:

1. Milk is the whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and five days after calving, or such longer period as may be necessary to render the milk practically colostrum free.
2. Skimmed milk is milk from which substantially all of the milk fat has been removed.
3. Cream, sweet cream, is that portion of milk, rich in milk fat, which rises to the surface of milk on standing, or is

separated from it by centrifugal force. It is fresh and clean. It contains not less than 18 per cent. of milk fat and not more than 0.2 per cent. of acid-reacting substances calculated in terms of lactic acid.

4. Whipping cream is cream which contains not less than 30 per cent. of milk fat.

5. Pasteurized milk is milk that has been subjected to a temperature not lower than 145 F. for not less than thirty minutes. Unless it is bottled hot, it is promptly cooled to 50 F. or lower.

6. Buttermilk is the product that remains when fat is removed from milk or cream, sweet or sour, in the process of churning. It contains not less than 8.5 per cent. of milk solids, not fat.

7. Homogenized milk or homogenized cream is milk or cream that has been mechanically treated in such a manner as to alter its physical properties, with particular reference to the condition and appearance of the fat globules.

Society Proceedings

COMING MEETINGS

New Jersey Medical Society, Spring Lake, June 24-25.
North Dakota State Medical Association, Grand Forks, June 24-25.
Southern Minnesota Medical Assn., Rochester, June 23-24.

SOUTH DAKOTA STATE MEDICAL ASSOCIATION

Thirty-Eighth Annual Session, held at Watertown, May 20-22, 1919

The President, Dr. D. L. Scanlon, Volga, in the Chair

Pyelitis

Dr. J. P. Isaac, Freeman: The routes of infection in pyelitis are commonly accepted to be hematogenous, urogenous and by contiguity. While bacteria are always the primary cause, other accessory factors are important. In the diagnosis of pyelitis, a careful study of the urine is essential. Pus and bacteria, especially the colon bacillus, in the urine, together with pain in the flank resembling lumbago, chills and high fever with remissions to the normal without any definite cause should justify the diagnosis of pyelitis. A further diagnostic aid in adults is ureteral catheterization to determine whether it is the kidney, pelvis or the bladder that is involved. In children, ureteral catheterization is not desirable; but the cystoscope may be used to exclude the bladder as the cause of infection. In the treatment of pyelitis, water must be given freely, and in some cases a milk diet for a few days is advisable. Rest in bed for a time is usually indicated. In medication, hexamethylenamin is most frequently used. In advanced cases, pelvic lavage is much practiced.

Catabolins in Disease

Dr. B. T. Green, Brookings: Nearly every departure from health is complicated to some degree by a toxemia due to the retention in the body of catabolins. These products of retrograde metamorphosis are definite chemical compounds and are mainly tissue poisons.

The extent to which different individuals may be affected by these morbific agents varies greatly. While disease is the usual cause of catabolic toxemia, other factors may produce the condition. Rest reduces the rate of tissue disintegration and permits the emunctory processes to rid the body of the accumulated poisons. On the other hand, weariness results with continued inactivity of brain or muscle. The body fluids stagnate, and catabolins are retained. Prophylaxis consists in the preservation of physiologic balance, and treatment should be directed toward: (*a*) the reduction in the rate of tissue destruction by proper treatment of the disease condition that has increased it; (*b*) the establishing of normal chemical changes by the regulation of physiologic processes; (*c*) the rendering of the reaction of the body fluids normal by indicated corrections in diet or by the administration of acids or alkalis as required, and (*d*) the securing of normal activity of the emunctory organs by proper attention to the existing pathologic condition.

Otolaryngology and the Mortality Rate

Dr. J. G. Parsons, Sioux Falls: Fully 50 per cent. of all deaths are due to tuberculosis, pneumonia, diseases of the kidney, heart and blood vessels, meningitis and a few acute infections, all of which are directly or indirectly concerned with an infection which gains access through the nose and its accessory sinuses and the throat. The presence of chronic pneumococcus, streptococcus and staphylococcus infections makes it possible, under favorable conditions, for pneumonias to develop. Middle ear infections are nearly all secondary to nose and throat infections, and, with their mastoid and intracranial complications, produce 2 per cent. of the mortality. Focal infections, so largely responsible for the death rate in middle life from cardiac, renal, circulatory and organic disease, are found in the tonsils, the nasal accessory sinuses and the ear. Thorough removal and drainage of these focal infections is indicated.

Health Conservation

Dr. D. L. Scanlon, Volga: Properly to conserve the health of the people we must have a thoroughly organized corps of expert public health workers, supported by an adequate appropriation. I recommend that a commission on public health be appointed by the governor for the purpose of studying the needs of our state and thus offering a tangible basis for the necessary legislative action. A matter of such importance as this is worthy of mention in a message from the governor to the legislature.

Leukocyte Count in Chronic Tonsillar Infections

Dr. J. M. Walsh, Rapid City: Among 200 cases, only two patients at the time of operation had a white blood count of less than 10,000. The highest white blood count was 38,000. Twelve had a count of 25,000 and more. The postoperative count in every case was lower than 9,000.

Operation for Acute and Subacute Mastoiditis

Drs. H. I. Lillie and R. A. Barlow, Rochester, Minn.: In cases of definite mastoiditis, operation is indicated reasonably early. The mortality is practically nil. Preservation of the hearing function is fairly certain. A second operation should not be necessary, except for a complication, such as sinus thrombosis or brain abscess.

Myomectomy Versus Hysterectomy

Dr. E. O. Giere, Watertown: In the woman past the age of 45 it is doubtful if myomectomy offers a single advantage over hysterectomy. On the other hand, myomectomy carries with it certain distinct disadvantages which must not be ignored, regardless of the age of the patient. Myomectomy does not make recurrence impossible. Myomectomy leaves possible the occurrence of malignancy. Considering the advantages and disadvantages of both operations, it does not appear justifiable to make myomectomy the operation of choice as a general rule in dealing surgically with myoma of the uterus. Myomectomy should be limited to patients in the child-bearing period; and the younger the woman, the more urgent should be this particular operation and, exceptionally, to women of any age where the tumor is single and pedunculated, provided there is a reasonable assurance that there may not be present small, undeveloped growths, and where malignancy can be ruled out beyond a question of doubt.

Treatment of Empyema

Dr. Arthur T. Mann, Minneapolis: In the army hospitals, where comparatively large numbers of empyemas could be given intensive study, it was soon found that early operation led to a high mortality. These men, as a rule, were already so ill from the influenza and from an extreme toxic condition accompanying the pneumonia which preceded the empyema that they were not able to withstand the shock of the operation and of the pneumothorax which accompanied the operation. These experiences quickly led to aspiration of the early cases of empyema and to repeated aspirations, as often as seemed necessary, until such a time as the patients were in a condition to undergo an operation with every reasonable chance of success. A drop in the mortality, more than could be accounted for by a decrease in the virulence of the infecting organism, was immediately noted. In fact, it was noticed that some patients got well under the aspiration treatment, though the majority of them still came to operation.

At the base hospital at Camp Dodge we undertook the problem of trying to sterilize the infected fluid accumulations and the forming pus at the time of the aspirations. This we did by injecting from 1 to 2 ounces of an active antiseptic fluid at the end of each aspiration. We used three different preparations in this work, namely, surgical solution of chlorinated soda, dichloramin-T and the 2 per cent. solution of liquor formaldehyd in glycerin. The first gave the best results; therefore we discontinued the other two. In selecting the proper time for operation, one must take into consideration the general toxic condition of the patient and the stage of the pneumonia. As a rule, an open operation should not be done until after the crisis is past and the affected areas are undergoing resolution. After watching the good effects of early aspiration in reducing the mortality in the cases which came to operation later when the patient's condition had improved and the pus had become too thick to be withdrawn properly through the aspirating needle, the impression was created that the method of Mozingo would be an improvement on the open method of operation which provides for drainage of pus, but which allows more or less collapse of the lung from the pneumothorax. I am enthusiastic about the method.

Medical Treatment of Gastric Ulcer

Dr. Owen King, Aberdeen: The first and one of the most important things in the successful treatment of gastric ulcer is absolute rest in bed for a period of at least three weeks. This lessens the gastric secretions, thus promoting a more rapid emptying of the stomach. The action of hydrochloric acid on the raw surfaces causes a spasmodic action of the pylorus and hence inhibits the normal emptying of the stomach. The principle of medical treatment is to produce conditions in the stomach in which the stomach contents are neutral or alkaline in reaction in order to remove the irritation at the pylorus. When this condition is obtained and the stomach can empty in a normal period, Nature will heal the ulcer if properly aided. Every case treated surgically should be followed by appropriate medical treatment in order to give the ulcer every oportunity to heal. I do not say that every case of peptic ulcer will respond to medical treatment. There are, no doubt, cases of marked pyloric obstruction from old scar tissue of healed ulcers, and these patients must have surgical treatment. There is an actual mortality of from 3.5 to 4 per cent. in gastro-enterostomy under the best surgeons, and 10 per cent. mortality with the average surgeon, while in the medical treatment there is practically no mortality.

Surgical Treatment of Gastric Ulcer

Dr. R. L. Murdy, Aberdeen: Surgical treatment in the hands of a skilful surgeon gives less mortality than medical treatment. Timely surgical treatment will avert the fatal complications and prevent morbidity in a very large percentage of cases. Excision of the ulcer takes the operation out of the realm of simplicity and adds materially to the danger without securing sufficient compensating advantages to justify the measure. The occasional excision, particularly in deep infiltrated and chronic ulcers with a cancerous tendency and in some others, is desirable and urgent. The location of the ulcer, together with local and general conditions, will also, in a measure, determine the advisability of excision. Ulcers on the greater curvature of the stomach and near the pylorus that can be brought under the alkaline secretions of the duodenum show a greater tendency to heal spontaneously after gastro-enterostomy than those that cannot be alkalized. The observation of Dr. Charles H. Mayo, that gastro-enterostomy greatly lessens the acid of the stomach, and that cancer seldom occurs where the tissues are bathed in this alkaline secretion, can be put to practical use in this connection.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Insanity, Baltimore

April, 1919, 75, No. 4

Work of Psychiatrists in Military Camps. E. S. Abbot.—p. 457.
Nursing Problem as Related to Psychopathology. R. Dewey, Wauwatosa.—p. 467.
Community Mental Health Movement and Its Probable Dependence for Success on a Higher State Hospital Standard for Ward Employees. S. D. Wilgus, Rockford.—p. 473.
Symbolism and Synesthesia. F. L. Wells, Waverly, Mass.—p. 481.
Psychoses in Mental Defects. A. Gordon, Philadelphia.—p. 489.
*Correlation Between Mental Defect and Anomalies of Hard Palate. I. Case, Chicago.—p. 501.
*Correlation of Neurology, Psychiatry, Psychology and General Medicine as Scientific Aids to Industrial Efficiency. J. D. Ball, Oakland.—p. 521.

Correlation Between Mental Defect and Anomalies of Hard Palate.—The analyses of cases examined by Case and others shows that because the palate is imperfect, it does not necessarily follow that mentality is imperfect, i. e., there is no necessary connection between the degree of mental capacity and a high palate.

Correlation of Neurology, Psychiatry, Psychology and General Medicine as Scientific Aids to Industrial Efficiency.—Ball is of the opinion that the establishment of medicopsychologic laboratories as the principal department of employment bureaus of every large industrial organization would be an economic asset and desirable. The establishment of a central employment clearing house with medicopsychologic laboratory which would act for groups of industrial organizations too small to economically conduct their own bureaus is suggested.

American Journal of Physiology, Baltimore

May, 1919, 48, No. 4

*Epinephrin from the Suprarenals Not Indispensable. G. N. Stewart and J. M. Rogoff, Cleveland.—p. 397.
*Gastric Response to Foods: II. Fractional Study of Coagulation of Milk in Human Stomach. O. Bergeim, J. M. Evvard, M. E. Rehfuss and P. B. Hawk, Philadelphia.—p. 411.
*Mechanism of Absorption from Intestine: I. Colon. One-Sided Permeability of Intestinal Wall to Chlorids. S. Goldschmidt and A. B. Dayton, Baltimore.—p. 419.
*Id. II. Colon. Passage of Fluid in two Directions Through Intestinal Wall. S. Goldschmidt and A. B. Dayton, Baltimore.—p. 433.
*Id. III. Colon. Osmotic Pressure Equilibrium Between Intestinal Contents and Blood. S. Goldschmidt and A. B. Dayton, Baltimore.—p. 440.
*Id. IV. Colon. Behavior of Sodium and Magnesium Sulphate Solutions. S. Goldschmidt and A. B. Dayton, Baltimore.—p. 450.
*Id. V. Colon. Effect of Sodium Sulphate on Absorption of Sodium Chlorid when Salts are Introduced Simultaneously into Intestine. S. Goldschmidt and A. B. Dayton, Baltimore.—p. 459.
*Id. VI. Colon. Influence of Calcium Salts on Absorption of Sodium Chlorid in Intestine. S. Goldschmidt and A. B. Dayton, Baltimore.—p. 173.
*Biologic Relation of Diastase Ferment between Maternal Blood, Fetal Blood and Amniotic Liquid of Animals. H. Kito, Tokyo.—p. 481.
Synergy and Antagonism of Sodium Salts in Barium Stimulation. W. D. Zoethout, Chicago.—p. 497.
*Antineuritic Vitamin in Wheat and Corn Kernel. C. Voegtlin and C. N. Myers, Washington.—p. 504.
*Pressure Changes in Cerebrospinal Fluid Following Intravenous Injection of Solutions of Various Concentrations. L. H. Weed and P. S. McKibben, Baltimore.—p. 512.
Experimental Alteration of Brain Bulk. L. H. Weed and P. S. McKibben, Baltimore.—p. 531.

Epinephrin from the Suprarenals Not Indispensable.—Stewart and Rogoff found that in dogs and monkeys, as previously shown for cats and rabbits, the liberation of epinephrin from the suprarenals is not indispensable for life and health.

Gastric Response to Food.—The subject of the experiments reported by Bergeim et al. was a normal man, 31 years of age, who had the unique ability to deliver samples of stomach contents at will. Not only could this man completely empty his stomach at any desired stage in the process of digesiton but he could also give small samples at short intervals throughout the entire gastric cycle, so that a fractional examination of his stomach contents could be made. Milk drunk rapidly left the stomach sooner and produced a smaller curd mass than milk drunk slowly or "sipped." Raw whole milk formed firm white curds which had "rubberlike" characteristics. The maximum curd formation took place at about one hour after the milk had entered the stomach. These large curds were apparently formed through the coalescing of numerous smaller curds. At this period curds as large as a man's thumb and weighing at least 15 grams may be formed. Milk which had been boiled five minutes curded in an entirely different manner. In this case the curds were small, soft, flaky and of a yellow color. The largest curds were about the size of a small pea. These curds left the stomach sooner and were much more digestible than the tough curds resulting from the ingestion of the raw milk. Dietetically, therefore, boiled milk is to be preferred to the raw product. Particularly tough, hard curds of large size were formed in the human stomach after the entrance of raw skimmed milk. When the skimmed milk was boiled, the resulting curds were not as large and tough as were those of the raw skimmed milk nor as small and soft as were the curds of boiled whole milk. The addition of 2.5 gm. of sodium bicarbonate to 500 c.c. of raw whole milk caused the formation of curds which were smaller and softer than those produced in similar milk in the absence of bicarbonate. There was a definite curd formation at five minutes although the stomach content remained alkaline for thirty minutes. That the bicarbonate treatment was not as effective as was boiling in producing small soft curds was shown by the fact that the curds of the boiled whole milk were smaller and softer than were the curds in the milk after bicarbonate had been added. The boiled milk also left the stomach sooner than the bicarbonate milk. As a general rule, the character of the milk curds was influenced in a very direct way by the fat concentration, i. e., the more fat the less curd. Not only was there less total curd formation but the curds which were formed were smaller and softer the higher the fat concentration. In fact, when 40 per cent. cream was drunk no curds were formed during the first half hour and even then the largest curds were only about the size of the head of a pin and they did not coalesce to form larger curds as was the case in milk of low fat content. The milks of high fat concentration were also very slow to leave the stomach.

Mechanism of Absorption from Intestine.—The apparent property of the intestine of passing dissolved substances in but one direction has been especially difficult of interpretation. This seeming power of the intestine to direct the stream of dissolved substances through the intestinal wall in but one direction, has been a subject of much investigation. Experiments were made by Goldschmidt and Dayton to determine this matter. They found that the colon is not characterized by a strictly one sided permeability. There is a threshold of the colon, below which chlorids diffuse from the blood stream into the intestinal contents. The blood content of chlorids is a factor in determining the height of this threshold. The chlorids diffusing into distilled water or very low concentrations of sodium chlorid in the colon have their origin in the blood.

Id.—Hypertonic solutions of sodium chlorid which readily pass through the intestinal wall were seen to attract fluid into the intestine above a certain threshold value, approximately 1.20 per cent. with a Δ of 0.786. At the same time chlorids pass in concentrated solutions into the blood. The concentration of the solute (sodium chlorid) and the Δ at the threshold point, that is the point at which the fluid balance just ceases to be in favor of the colon, shows a striking constancy in a long series of experiments. There is evidence that increased blood chlorids may effect this threshold value.

Id.—Solutions of sodium chlorid above or below blood level come into a chlorid partial pressure equilibrium with the blood. Increase of blood chlorids affects this equilibrium. There is an attempt at total osmotic pressure equilibrium between the colon contents and the blood. Evidence is at hand which indicates the other blood constituents diffuse into sodium chlorid solutions in the colon. This is more apparent as the concentration of the solution approaches the level of the blood chlorids.

Id.—The colon behaves toward solutions of sodium sulphate essentially like a semipermeable membrane. Water is absorbed from hypotonic solutions, and the increases to blood level. With hypertonic solutions the volume increases, the concentration decreases and the Δ approaches blood level. Solutions of concentration nearly iso-osmotic with the blood show little change in volume and the Δ closely approximates that of the blood. Hence, there is free passage of water with pracically no diffusion of sulphae. The deficit of sodium sulphate is very small and bears no constant relationship to the total amount of sodium sulphate introduced, nor is it dependent on the length of stay in the colon, and therefore seems to be due to adsorption rather than to diffusion. Magnesium sulphate shows even less absorption from the colon than sodium sulphate. The failure of absorption of these salts from the colon emphasizes the specific importance of the large intestine in saline cathasis.

Id.—When sodium sulphate or magnesium sulphate is added to solutions of sodium chlorid and introduced into the colon, the concentration of chlorids diminishes rapidly and the amount present approaches a zero point. The concentration of sodium or magnesium sulphate approaches a value of a concentration equi-osmotic with the blood. The final Δ of the solution approximates that of the blood. Less chlorids diffuse into weak solutions of sodium sulphate than into distilled water and this amount decreases with increasing concentration of sodium sulphate. Sodium sulphate speeds the rate of absorption of sodium chlorid through the colon wall when the two are introduced simultaneously. This increases with increasing concentration of the sulphate. It occurs in hypotonic as well as in hypertonic solutions. After sodium sulphate has been present in the intestine the subsequent absorption of sodium chlorid and water to some extent increases. It is never decreased. Other factors such as mechanical washing, introduction of various strengths of sodium chlorid, notably distilled water, do not affect the subsequent absorption of sodium chlorid or fluid in the colon. Analogies of the effect of sodium sulphate on chlorid, in other parts of the body, are presented from the literature.

Id.—Calcium lactate in increasing concentrations first accelerates, then inhibits the absorption of chlorids from solutions of sodium chlorid in the colon. There is an indication that this action bears a relationship to the ratio of calcium to chlorine. The first stage of the action of calcium lactate on sodium chlorid resembles that of sodium sulphate on the salt. The last stage presents the opposite effect to that of sodium sulphate.

Blood Diastase and Placental Function.—When the blood vessels of the kidneys are tied or when nephritis is caused by the injection of uranium, a retention of diastase in the maternal blood is produced and there is an increase of diastase in the fetal blood. In the case of nephritis after the injection of uranium, there is no change in the quantity of diastase in the amniotic liquid. When takadiastase and pure glucose are injected simultaneously into the vein, blood sugar increases both in the maternal and fetal bodies, but no change is produced in the amniotic liquid and there is no change in the diastase of the maternal blood, but we find a little increase of it in the fetus and in the amniotic liquid. From the above facts the authors conclude that the placenta is permeable to the diastase ferment. They do not explain the reason why the diastase ferment passes into the amniotic liquid while sugar does not. In the case of the parenteral injection of a ferment it is lost in the animal body, which seems to be due not to the toxic influence of the ferment or to the regulation of the placenta, but to the regulating function of some other part of the body. As regards the origin of the amniotic liquid, there are many complicated relations, and it is difficult to explain it by the simple results of the present experiments.

Antineuritic Vitamin in Wheat and Corn Kernel.—According to Voegtlin and Myers the germ or embryo of the wheat and corn kernel contains all of the antineuritic vitamin of these cereals. Wheat flour or corn meal containing the germ is, therefore more nutritious than the corresponding highly milled products. Consideration of the distribution of the antineuritic substance in the wheat and corn kernel and in the animal body suggest that this accessory food is necessary for the metabolism of the growing plant as well as the animal body. It appears that cells with an especially active metabolism are also rich in antineuritic vitamin.

Cerebrospinal Fluid Pressure.—Weed and McKibben claim that intravenous injections of Ringer's solution cause no lasting change in the pressure of the cerebrospinal fluid. Intravenous injections of hypotonic solutions (distilled water) are followed by a marked and sustained rise in the pressure of the cerebrospinal fluid. Intravenous injections of hypertonic solutions (concentrated sodium chlorid, sodium bicarbonate, sodium sulphate and glucose) cause initial rise in the pressure of the cerebrospinal fluid followed immediately by marked fall in this pressure, often to below zero.

American Journal of Roentgenology, New York City

May, 1919, **6**, No. 5

Hemorrhagic Pneumonitis. J. H. Selby.—p. 211.
*Roentgen-Ray Study of Epidemic Influenza and Bronchopneumonia. J. A. Honeij, New Haven.—p. 226.
*Complications of Influenza from Roentgenologic Standpoint. R. H. Boggs, Pittsburgh.—p. 239.
Caldwell Portable Roentgen-Ray Outfit. C. N. Moore, Schenectady.—p. 243.

Roentgen-Ray Study of Epidemic Influenza and Bronchopneumonia.—Twenty-eight cases of influenza and pulmonary congestion were studied by Honeij by serial roentgenography. The examinations varied in number from one to ten. In the case of influenzas and congestions these examinations often were taken every day while the bronchial changes progressed, until the patient recovered, or until a pneumonic process developed, examination being less frequent after a definite diagnosis of the process was made. In the case of a pneumonia being diagnosed on first examination, repeated examinations were then made to determine the progress of the disease until the final stage had been reached. A detailed report is given of the findings in these cases.

Complications of Influenza from Roentgenologic Standpoint.—According to Boggs the roentgen rays as a means of diagnosing and recording the changes in the lungs and pleura are not directly diagnostic; but when compared with inspection, palpation, percussion and auscultation they yield much more accurate information than can be obtained by physical signs alone. It is a more accurate method than percussion alone, because even deep percussion is not accurate more than 2½ inches below the surface, and the density in the lungs and pleura can be compared better with the normal surrounding or adjacent organs and tissue. Stereoscopic plates taken anteriorly and posteriorly show the density and thickness of a pneumonic lung or a layer of fluid in the pleural cavity. By knowing the thickness and density of the pathologic lesion in the lung or pleura, or both together, with its position, one can usually tell what kind of breathing is heard by the stethoscope. The fluoroscope is a valuable aid to the roentgenologist for chest examinations in showing that much of the function of the lungs is disturbed by the pulmonary disease; but it cannot take the place of a good pair of stereoscopic plates taken posteriorly and anteriorly.

Boston Medical and Surgical Journal

June 5, 1919, **180**, No. 23

Reflections of a Physician Who Stayed at Home. S. Crowell, Dorchcester.—p. 629.
*Influenza and Streptococcus Hemolyticus. D. B. Medalia, A. E. F.—p. 635.
Survey of 100 Cases of Drug Addiction Entering Camp Upton, N. Y., Via Draft, 1918. G. E. McPherson, Medfield, Mass., and J. Cohen, New York.—p. 636.
Two Cases of Fracture of Clavicle. F. E. Peckham, Providence, R. I.—p. 641.
Progress of Orthopedic Surgery. C. H. Bucholz, Boston.—p. 643.

Influenza and Streptococcus Hemolyticus.—In the laboratory of General Hospital No. 14 there came up the question of what could be the cause of a number of undiagnosed pyrexias, which ran a course of a few days and then dropped down to normal and stayed normal. With the temperature there was also a slight irritation of the throat. The bacillus "influenza" was present in great quantities in case after case. A majority of men operated on for appendicitis acquired a primary infection of streptococcus. One set of cultures proved to be valuable, and that was a set made from the wall of one of the operating rooms. It contained *Streptococcus hemolyticus*. The habit in that hospital was to have a number of adhesive plasters cut and stuck to the wall of the operating room. After the patient was operated on, sterile pads were put on the wound and the strips of adhesive plaster from the wall were put on to hold the dressing. It was concluded that the infection was introduced by the adhesive plaster from the wall. The walls were washed and repainted and the habit of sticking adhesive strips to them was stopped. The almost postoperative epidemic ceased.

Bulletin Canadian Army Medical Corps

May, 1919, **1**, No. 8

*Chronic Septic Inflammation in Bone Following Gunshot Wound. W. E. Gallic.—p. 106.
*Tuberculosis As a Causative Factor in Disordered Action of Heart. H. R. Macintyre.—p. 112.
Extension in Compound Fractures of Tibia and Fibula. C. E. Preston.—p. 114.
*Comparison of Kolmer's Modification of Original Wassermann Test and No. 4 Method as Recommended by Medical Research Committee. N. O. Thomas and K. M. B. Simon.—p. 116.
*Postmortem Findings and Bacteriologic Examination of Seventy-Three Cases of Pneumonia Supervening on Influenza. T. R. Little.—p. 117.
Diphtheroids in Case of Influenza Showing at Necropsy a Single Kidney. Case of Right Dystopic Kidney. E. Fidlar.—p. 118.
*Roentgen-Ray Examination of Liver in Cases of Arsenic Poisoning and Jaundice. G. S. Strathy and L. Gilchrist.—p. 120.
*Nephritis in Returned Soldier. A. H. McCordick.—p. 122.
Cardiac Disturbances in Returned Soldier. C. C. Birchard.—p. 123.
Utilization of Food Waste in Canadian Hospitals. I. D. Carson.—p. 124.
*Anomaly of Fundus Oculi. S. H. McKee.—p. 125.

Chronic Septic Inflammation in Bone Following Gunshot Wound.—In the presence of nonunion, the fact that the wound is septic, Gallie says, is not a contraindication to active treatment of the fracture as well as of the osteomyelitis. Gratifying results may be anticipated from thorough freshening of the ends and adjusting of the fragments, providing efficient drainage is secured. The best time to correct malunion in septic cases is at the time of the operation for the cure of the disease in the bone.

Tuberculosis as Causative Factor in Disordered Action of Heart.—The subcutaneous tuberculin test was done by seven medical officers in 300 unselected cases of disordered action of the heart and the results are reported by MacIntyre. Positive reactions were obtained in thirty-two cases; negative reactions in 268 cases and local reactions only in ninety-seven cases.

Comparison of Wassermann Tests.—One hundred and seventeen serums in all were tested by Thomas and Simon, the two tests being performed side by side with the same gross complement, amboceptor and washed sheep's corpuscles; all serums were inactivated at the same time and the tests performed under similar conditions of temperature and pressure, in this way eliminating sources of error as much as possible. Ninety serums gave negative reactions with both methods. Twenty serums gave a strongly positive reaction, i. e., complete inhibition of hemolysis with clear supernatant fluid in both tests, and in no case did a serum give a strongly positive reaction with Kolmer's method and not so in the test as described in No. 4 standard method. In only one case was a serum slightly positive or doubtful in one and negative in the other. In no case was there marked divergence in the results; in only four out of 120 cases was there a slight difference in the readings of the two methods. In long treated cases serums tested by No. 4 method give a more delicate reaction. The authors believe that the varying number of units of complement used in No. 4 method tend to eliminate sources of error by nonspecific complement fixation.

Postmortem Findings and Bacteriologic Examination of Influenzal Pneumonia.—A small gram-positive diplococcus was found by Little in the lung sixty-two times, in the spleen nine times and in the heart's blood twenty-three times. It was the predominating organism, and is regarded by the author as of etiologic significance, especially in pneumonia supervening on influenza. He suggests that it is probable that the initial infection of the upper air passages is due to the *B. influenzae*, and the graver complications are due to the small gram-positive diplococcus as an intermediate type between the pneumococcus and streptococcus. It differs from both in animal experimental inoculations. It did not agglutinate the three types of pneumococcus serum in a higher dilution than 1 in 10. It was the only organism found in pure culture. Little is satisfied from animal experiments that a vaccine prepared from it proves of prophylactic value. There was no systemic effect; there was, however, a slight local reaction at the site of inoculation.

Roentgen-Ray Examination of Liver in Arsenic Poisoning and Jaundice.—The angle formed by the junction of the liver and vertebral shadows on the right side is usually a right angle. Less frequently it is an obtuse angle. Nine of ten cases of acute liver atrophy examined by Strathy and Gilchrist showed the upper surface of the liver more dome shaped than normal and the liver vertebral angle an acute angle. The atrophy of the liver was due to arsenic poisoning in seven of the cases and to catarrhal jaundice in the other three. In the leftsided pleural effusions and marked cardiac hypertrophy the liver vertebral angle tends to be somewhat acute, but the shadow of the liver is not more dome shaped than normal. The angle in these cases is due to pressure on the left lobe of the liver slightly tilting the organ.

Nephritis in Returned Soldiers.—McCordick and Robbins analyzed 2,400 records of returned soldiers. In only seventeen instances was there no record of any urinary examination. There were eighty-seven cases of nephritis in only three of which was the nephritis a definite complication of other conditions (tuberculosis and syphilis). A preexisting nephritis was suspected from the history in seven cases. Nine men had seen service only in England, never having gone to France. Sixty-eight soldiers had seen active service in France. These sixty-eight cases were definite cases of so-called trench, or war nephritis. According to the authors this so-called "war nephritis" is mild in type; runs an inoffensive course; produces no serious cardiovascular changes; does not destroy kidney structure to any extent; and 50 per cent. of the cases, at least, progress favorably to a cure.

Anomaly of Fundus Oculi.—On examining the right fundus of a soldier, the picture seen by McKee was as follows: At the area of the optic disk instead of the disk was a rectangular pearly white membrane, attached by bands to the retina at each coroner except at the superior temporal. This membrane hung in front of the retina like a curtain. It was a good deal larger than the normal optic disk, and at the superior temporal corner slightly more than 1 millimeter from the underlying retina. On the superior border the artery ran along to the temporal part with numerous branches extending to the area above. To the nasal side and below the vessels were also profuse. About this membrane there were seen pigmentary changes denoting almost a complete rupture of the choroid. There were also one or two areas of displaced pigment in other parts of the retina.

Georgia Medical Association Journal, Atlanta

April, 1919, **7**, No. 12

Analysis of Six Brain Cases. H. Crenshaw, Atlanta.—p. 226.

Journal of Cutaneous Diseases, Chicago

May, 1919, **37**, No. 5

Roentgen-Ray Treatment of Tinea Tonsurans. H. H. Hazen, Washington, D. C.—p. 307.
*Eczema in Infants and the Thyroid. M. L. Ravitch and S. A. Steinberg, Louisville.—p. 313.
*Case of Atypical Scabies. D. W. Montgomery, San Francisco.—p. 317.
Clinical Types of Lichen Planus. J. A. Fordyce and G. M. MacKee, New York.—p. 320.

Eczema in Infants.—The type of infantile eczema which Ravitch and Steinberg think is due to disturbed thyroid secretion does not differ much from other infantile eczemas, except that it is always a dry eczema. The skin is harsh and rough; there may be sweating but no fatty or oily secretion seems to be present. The treatment consists in the administration of iodin, iodid or thyroid gland.

Atypical Scabies.—Montgomery's patient had a minutely vesicular eruption on the sides of the fingers, some scratch lesions on the arms and in the axilla, a finely granular crusted eruption in the supramental groove, which, with the lens, was seen to be also minutely vesicular, and an intense, generalized, sleep-robbing pruritus. The vesiculation on the fingers and face recalled a plant poisoning but the patient denied exposure. Scabies was next considered, but there was no pustulation. There were no lesions between the fingers nor on the front of the wrists, nor on the immediately adjacent portion of the palms which are so frequently affected. The axillae were itchy, but almost entirely free of eruption. The nipples were also itchy, but did not even look irritated. No other member of the family suffered from the same complaint. The lesion on the thumb was examined microscopically in glycerin, and the cuniculus provided with acarus eggs and feces was easily demonstrated. The diagnosis of scabies was fixed beyond a doubt.

Kentucky Medical Journal, Bowling Green

June, 1919, **17**, No. 6

Examination of Chest for Tuberculosis. E. Barr, Owensboro.—p. 241.
Acute Abdomen. M. Casper, Louisville.—p. 243.
Influenza. B. C. Frazier, Louisville.—p. 250.

Maine Medical Association Journal, Portland

May, 1919, **9**, No. 10

Physiology of Digestion. J. S. Jamieson, Portland.—p. 269.
*Endermic Vaccination Against Smallpox. W. S. Walsh, West Pownal.—p. 280.
Case of Lethargic Encephalitis. J. F. Shaw, F. H. Bartlett, Fairfield.—p. 284.

Endermic Vaccination Against Smallpox.—This method was used exclusively in 280 vaccinations at the Maine School for Feebleminded with satisfactory results. Of the 280 vaccinations, 174, or 62.11 per cent., were successful. Of the 106 failures, eighty-two, or 29.27 per cent., had typical scars resulting from previous vaccinations. One of the failures had smallpox some years ago. Twenty-three, or 8.21 per cent., had never been vaccinated successfully before and failed on this occasion. Only thirty-six, or 12.85 per cent., among 174 successes had scars. In Walsh's opinion the endermic method of vaccination is the best of all the methods. The comparative freedom from complications is apparently a marked feature of this method.

New Orleans Medical and Surgical Journal

June, 1919, **71**, No. 12

Recollections of War in Europe. L. J. Genella, B. E. F.—p. 493.
Bronchopneumonia Following Measles. S. F. Braud, New Orleans.—p. 512.

New York Medical Journal, New York

June 7, 1919, **109**, No. 23

Acute Diverticulitis of Colon. J. F. Erdmann, New York.—p. 969.
N. C. A. Neurocirculatory Asthenia. J. H. Barach, Pittsburgh.—p. 972.
Malingering. C. Pope. Louisville.—p 975
Rôle of Erythrocytes and Leukocytes During Health and Disease. A. C. Geyser, New York.—p. 978.
*Chronic Appendicitis with Special Reference to Obscure but Constant Syndrome. P. G. Skillern, Jr., Philadelphia.—p. 982.
Control of Syphilis. R. C. Jamieson, Detroit.—p. 984.
Hookworm. W. A. Wovschin, New York.—p. 988.
New Hypodermic Syringe and Needles. A. Kahn, New York.—p. 990.
Prophylaxis and Treatment of Influenza. L. T. de M. Sajous, Philadelphia.—p. 992. Cont'n.
War Neuroses and Their Lesson. T. W. Salmon, New York.—p. 993.

Syndrome of Chronic Appendicitis.—The outstanding feature of this syndrome discussed by Skillern is constipation, obviously due to retarded motor activity of the bowel, fatigued peristalsis or intestinal stasis. The ascending colon becomes fagged out. No adhesions were present in this series, the appendix was not even kinked, and the patients recovered after simple removal of the appendix.

New York State Journal of Medicine, New York

May, 1919, **19**, No. 5

Congenital Malformations of Spine. C. D. Ried, Syracuse.—p. 161.
Rôle of Anesthetist on Surgical Team. J. J. Beuttner, Syracuse.—p. 164.
Dynamics of Abdominal Hernia. H. R. Trick, Buffalo.—p. 166.
Care of Children Before and After Tonsillectomy. C. H. Smith, New York.—p. 168.
Sterility. G. M. Gelser, Rochester.—p. 174.
Motherhood. R. W. Lobenstine, New York.—p. 177.
Care of Premature Child in Homes. H. Schwarz, New York.—p. 180.
Longitudinal Sinus; Its Adaptability in Procuring Blood for Diagnosis; Its Use in Transfusion of Blood, and for Diagnostic Purposes; An Ideal Method in Infancy. L. Fischer, New York.—p. 183.
Case of Perversion of Appetite with Unique Complications. A. W. Benson, Troy.—p. 185.
Recent Advances in Bacteriologic Diagnosis of Pneumonia. O. W. H. Mitchell, Syracuse.—p. 188.
Office of Chief Medical Examiner; Its Relation to Public, District Attorney's Office and Medical Profession, C. Norris, New York.—p. 189.
Use of Colloidal Gold Test in Public Health Work. W. E. Zielinski, Buffalo.—p. 195.

South Carolina Medical Association Journal, Greenville

May, 1919, **15**, No. 5

Results of Influenza with Special Reference to Eye, Ear, Nose and Throat Diseases. L. O. Mauldin, Greenville.—p. 441.
Value of Biologic Principles in Surgical Practice. J. S. Horsley, Richmond.—p. 445.
Interesting Aspects of the Recent Epidemic of Influenza. J. H. Gibbes, Columbia.—p. 453.
Treatment of Morphinism. H. Crenshaw, Atlanta, Ga.—p. 459.

Southwest Journal of Medicine and Surgery, El Reno

May, 1919, **27**, No. 5

Acute Postoperative Dilatation of Stomach. J. E. Gilcrest, Gainesville, Texas.—p. 93.
Culturing Balantidium Coli. A. J. Hinkelmann, Oklahoma City.—p. 99.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

May 17, 1919, **2**, No. 3046

Medical Tradition. J. Tweedy.—p. 597.
*"Filter-Passing" Virus in Polyneuritis, Encephalitis, Trench Fever, Influenza and Nephritis. J. R. Bradford.—p. 599.
Experimental Reproduction of Influenza, Nephritis and Encephalitis. E. F. Bashford.—p. 601.
*Bacteriology of Certain "Filter-Passing" Organisms. J. A. Wilson.—p. 602.
*Ulceromembranous Laryngitis of Streptococcic Origin. J. A. M. Hemmeon.—p. 604.
Shell Wound of Left Side of Neck: Injury of Great Vessels and Division of Vagus Nerve: Recovery. G. Bell.—p. 604.
Jaundice: With Special Reference to Types Occurring During War. W. H. Willcox.—p. 605.

"Filter-Passing" Virus in Certain Diseases.—Bradford claims that Koch's postulates have been fulfilled in six maladies, polyneuritis, lethargic encephalitis (or encephalitis more broadly), trench fever, influenza, nephritis and rabies. In a considerably larger group only the bacteriologic evidence of the obtaining by culture of a virus is reported. These maladies are: mumps, measles, rose measles, typhus, scarlet fever, hemorrhagic chickenpox and vaccinia.

Bacteriology of Certain Filter-Passing Organisms.—Wilson describes the technic followed in studying these organisms found in polyneuritis, encephalitis, influenza, trench fever, nephritis and rabies.

Ulceromembranous Laryngitis of Streptococcic Origin.—Fifty cases are analyzed by Hemmeon. Out of fifty cultures, thirty-five showed streptococci in almost pure growth; ten showed the same as the prevailing organism, and the remainder were indefinite. Of the thirty-five streptococcic growths, twenty-five were classified as *Streptococcus hemolyticus* and ten were *S. viridans*. Further subdivision of these groups was not attempted.

Dublin Journal of Medical Science

May, 1919, **9**, No. 5

Skin Stains on Hair Dyes. W. G. Smith.—p. 197.
Cases of Lethargic Encephalitis. J. O'Carroll and G. Nesbit.—p. 206.
Alternation of Generations and its Bearings on Cancer. J. Beard.—p. 217.

Glasgow Medical Journal

May, 1919, **9**, No. 5

Complications of Influenza Treatment. J. Henderson.—p. 257.
Cases of Gunshot Injury to Head. J. A. Wilson.—p. 278.

Journal of State Medicine, London

May, 1919, **27**, No. 5

Infection and Disinfection in War Time. J. M. Beattie.—p. 129.
Lesions of the 1918 Influenza Epidemic. C. Carnwath.—p. 142.

Lancet, London

May 17, 1919, **2**, No. 4994

*Rôle of Sympathetic Nervous System in Disease. W. L. Brown.—p. 827.
War Neurosis: Comparison of Early Cases Seen in Field with Those Seen at the Base. W. Brown.—p. 833.
Temperature Environment and Thermal Debility: Study of Beneficial and Injurious Effects of Heat. C. F. Sonntag.—p. 836.
*Action of Flavine and Its Derivatives. A. H. Tubby, A. R. Ferguson, T. J. Mackie and L. F. Hirst.—p. 838.
Infective Scar Tissue and Its Relation to Pains: Particularly Painful Amputation Stumps. E. M. Corner.—p. 840.
Quinin as an Abortifacient. W. C. Swayne, and E. Russell.—p. 841.
Case of Acute Ascending Paralysis. H. Sutherland.—p. 841.
*Ruptured Rectus Abdominis, Influenzal: Operation; Recovery. W. Balgarnie.—p. 843.
Case of Acute Appendicitis; Suppurative Pylephlebitis; Recovery. R. A. Barlow.—p. 844.

Rôle of Sympathetic Nervous System in Disease.—Brown contends that the stimulation of the sympathetic and of its coadjutors, the suprarenals and thyroid, means the spending of reserves in the supreme struggle for survival. The quickening of all the vital processes may produce, for all time, a feeling of exaltation and well being. This may be regarded as a physiologic justification for Nietsche's injunction to live dangerously. But exhaustion lies in wait if the struggle is unduly prolonged. A vicious circle is the pathologic equivalent of a prolonged struggle. Next, under physiologic conditions the sympathetic acts as a whole, while one of the phenomena of disease is dissociation. Sensory dissociation is seen, for instance, in tabes and syringomyelia. Sympathetic dissociation may play a part in diabetes and in disorders of digestion and circulation. The general plan of the sympathetic and its general action in assisting the struggle for existence is discussed. Evolved in a subconscious plane, it remains forever beyond the control of the will. The higher centers of the brain show their influence on the lower chiefly in the direction of inhibition. Brown says that the highest organism is the most self-controlled, but the sympathetic cannot be thus controlled. Though we may deaden the emotion, we cannot prevent the response to an emotion once evoked. To regulate this we must trust to reserves, inherited and maintained through generations of stable and equable ancestors. "We might modify the dictum that this war will be won by the nation with the strongest nerves, and say it will be won by the nation with the strongest adrenals, for just as character is revealed in the instinctive response which occurs quicker than thought, so the powers of tenacity and endurance may be foreshadowed in the original emotional response."

Action of Flavine and Its Derivatives.—Experiments were made by Tubby and others to determine the minimum lethal dose of proflavine and acriflavine for cats. All injections were made into the external jugular vein under ether or chloroform anesthesia. The effects were largely dependent on the rate of injection. Rapid injection usually produced respiratory failure, the heart continuing to beat. The animal could usually be revived by artificial respiration. The agglutination effect could be reduced to a minimum by giving the injections very slowly. Deep yellow staining of the mucous membranes is produced by the larger doses. It appears within a few minutes, is marked for twenty-four hours, and then fades slowly. As the result of numerous experiments,

The Sympathetic Syndrome.—Ramond and Carrié analyze the symptoms liable to be induced when the sympathetic nervous system is suffering from the action of some poison or other irritation or from inadequate nourishment. The resulting tremor, emotive instability and puffy face are sometimes mistaken for alcoholism or for "emotional nervousness," or the subjects are supposed to have heart disease on account of their tachycardia; or dyspepsia from their disturbances after eating, or an abortive type of exophthalmic goiter is assumed. The tachycardia is not a tachycardia from exertion, and this distinguishes it from actual organic disease of the heart and the tachycardia of convalescence and that with high blood pressure. The tachycardia of the sympathetic syndrome is more like the *névrose tachycardique* to which Gallavardin has recently been calling attention. Only when the most painstaking examination has failed to reveal any local cause for irritation of the sympathetic nerve at any point, are we justified in assuming some general cause, and applying merely general sedative measures, rest, hydrotherapy and other means to soothe the nervous system.

Aerobic Microbian Associations in Influenza.—Richet and Barbier relate that the sputum of their influenza patients contained most frequently the Pfeiffer bacillus associated with the catarrhalis. Next in order of frequency was the association of the Pfeiffer and the pneumococcus, and third in the list, the symbiosis of all three. The Pfeiffer-catarrhalis gave a grave prognosis, and the infections with streptococci always proved fatal. The presence of the pneumococcus did not seem to render the prognosis any graver than with the Pfeiffer-catarrhalis alone. The action of metal salts seemed most pronounced in the pneumococcus cases. A fixation abscess seemed to promote the cure in some of the pneumococcus cases. In conclusion they remark that it may be well to combat these mixed infections by injecting the patient with several of the specific antiserums.

Hemorrhagic Spirochetosis.—Pagniez prefers the term *spirochetose ictérigène*, as the hemorrhagic form is not so much in evidence in France as in Japan. Only in twenty-two of his forty-three cases of this spirochetosis was there any tendency to hemorrhage, and in these cases it took the form of recurring epistaxis, but these were always the severer forms. The blood picture in these graver cases and often in the milder ones showed always a considerable reduction in the number of blood platelets and an exceptionally long coagulation time. This great reduction in the platelet content was evident from the very first, and was independent of the jaundice. This drop in the platelet count is a valuable aid for the differential diagnosis in incipient and dubious cases. The platelets may drop to nine-tenths of the normal number or even below. The red and white cells do not show any such drop in numbers; there is often actual leukocytosis. The platelets finally return to the normal figure, but this may take two or three weeks. Pagniez has not been able to detect a drop in the blood platelets in any other of the principal infectious diseases, such as the eruptive fevers, pneumonia or erysipelas. In typhoid there is a reduction, but it is far from that with this spirochetosis. Only in certain cases of purpura and in pernicious anemia is anything comparable observed, and in these the drop in blood platelets is permanent. He published in 1912 a case of hemorrhagic purpura with complete disappearance of all the platelets from the blood. In the spirochetosis in question, the nonretraction of the clot and the drop in the blood platelets were constant, but not all the cases presented hemorrhage. This suggests that other factors than these are involved in the hemorrhages.

The Feeble Pulse in Idiots.—Laroche and Richard have been impressed with the microsphygmia which seems to be almost the rule in the inmates of a certain asylum for feebleminded where they have been conducting research on the endocrine system in idiots. They theorize to explain the mechanism and causes of the hypertony of the sympathetic nervous system which seems to be responsible for the microsphygmia.

Archives de Médecine des Enfants, Paris

May, 1919, **22**, No. 5

*Scurvy in Infants. J. Comby.—p. 225. Cont'n.
*Walled-Off Meningitis in Infants. R. Marcland.—p. 251.
Congenital Myxedema. G. Schreiber.—p. 256.
*Lethargic Encephalitis. J. Comby.—p. 259.

Scurvy in Infants.—Comby now has a record of sixty cases of Barlow's disease in infants. In all but two there was a painful pseudoparalysis and in forty-six there were ecchymoses on the gums; those infants without the latter were always too young to have had any teeth appear. There were signs of rachitis in about 50 per cent. The symptoms from the scurvy had been ascribed to everything but the right cause in the overwhelming majority of the cases. He cites a case reported by Rotch in which three surgical operations had been made on the infant before the scurvy had been recognized. A common blunder is to ascribe the symptoms to inherited syphilis alone. Burckhardt relates that in the case of one infant of 11 months the diagnosis wavered only between osteomyelitis and sarcoma of the femur. Puncture brought blood and the femur had fractured, but prompt recovery followed when treatment for scurvy was tentatively applied.

Walled-Off Meningitis.—Marcland expatiates on the cure of an infant of 4 months with severe meningitis and visual disturbances from the pyohydrocephalus. This makes the fifth case of the kind on record, he says, in which recovery followed injection of the meningococcus antiserum directly into both ventricles. The pocketing of the process and the stasis were favored by the long intervals between the intraspinal injections, the child living on a remote farm.

Lethargic Encephalitis.—Comby has compiled the prevailing views on this disease.

Bulletin de l'Académie de Médecine, Paris

April 29, 1919, **81**, No. 17

*Compulsory Notification of Tuberculosis. Hayem and others.—p. 516.
*Therapeutics Judged by Figures. L. Grimbert.—p. 540.
*Unrecognized Amebic Dysentery. M. Labbé.—p. 550.
Alleged Solutions of Mercury Benzoate. M. Delépine.—p. 552.
*Health of Schoolchildren in the Regions Occupied by the Germans. J. Genevrier and G. Heuyer.—p. 553.
*Serotherapy of War Wounds. P. Bouchet.—p. 556..

Declaration of Tuberculosis.—The various medical societies of France have been discussing the feasibility and advantages of introducing compulsory notification of tuberculosis. The Académie has devoted a major part of each meeting recently to discussion pro and con, and the larger part of the *Bulletin* for several weeks has been filled with the reports of the discussions. The resolutions voted were given in the Paris Letter, p. 1781.

Therapeutics Judged by Figures of Amounts Used.—Grimbert adds another ten year report to those that were published in previous decades dealing with the drugs used in the public hospitals of Paris. These reports show the trend of the times in therapeutics. During the last decade there has been a constant decline in the use of antiseptics, iodids, bromids, hydrogen dioxid, glycerin, arsphenamin and cod liver oil. The drugs showing a constant upward trend include neo-arsphenamin, tincture of iodin and hexamethylenamin. The lactic ferments, organ extracts for injection, and certain colloidal metals are still on trial.

Blunders with Amebic Dysentery.—Labbé refers to cases of amebic dysentery which are mistaken for some other form of enteritis as they present an atypical course. Some of the persons affected had never been out of France or even out of Paris. There may never have been actual dysentery, and only the discovery of the ameba in the stools cleared up the cause of the chronic enteritis of up to twenty years' standing.

Health of Schoolchildren in Occupied Regions.—Genevrier has been visiting Lille and the other cities in the *régions libérées*, on behalf of the Ligue d'hygiène scolaire. He reports that the results of four years of undernourishment and overwork demand immediate relief for the schoolchildren. See Paris Letter, p. 1558.

Polyvalent Serotherapy in Wounds.—Bouchet emphasizes the importance of a polyvalent antiserum in treatment of wounds and other injuries in war and in peace. He urges its use in traumatic shock, in septicemic conditions, in traumatic infectious processes and industrial accidents. The antiserum with which he has been working is that made by Leclainche and Vallée. In 420 war cases the traumatic shock became much attenuated after injection of the antiserum. In seventeen cases of hemophilia it had a decidedly favorable action, as also in large numbers of ordinary peace injuries.

Progrès Médical, Paris

Feb. 15, 1919, 34, No. 7

Aerial Concussion. H. Damaye.—p. 59.
Hematemesis Without Ulcer. P. Batigne.—p. 62.

Feb. 22, 1919, 34, No. 8

*Nature of Cancer J. Audrain.—p. 69.
*Elimination of Procain After Spinal Anesthesia. H. P. Achard.—p. 70.
Technic for Bacteriologic Diagnosis of Tuberculosis. Tilmant.—p. 70.

March 1, 1919, 34, No. 9

Streptococci in Influenza Sputum. J. Lochelongue.—p. 79.
Causative Agent of Trench Fever, Influenza and Nephritis. A. Bernard.—p. 79.

The Nature of Cancer.—Audrain comments on the resemblance between the action of the cancer cell and that of the syncytium cell. The latter also destroys all before it until it reaches the vessels in the ovum, and thus brings the young vessels into the pools of blood. But it stops when this is accomplished, whereas the cancer cell keeps on. Audrain suggests that when the cells of the organism are kept in a state of abnormal excitation, it is easy to conceive that after some trauma certain cells may start on a destructive course, like that of the syncytium and, escaping from control, develop cancer. Syphilis seems to keep the tissues in a state of abnormal excitation, and hence this may be a factor in malignant disease although possibly not until the third and fourth generation. He asks in conclusion whether some abnormal general or local superactivity cannot be determined as having long preceded the development of the cancer.

Elimination of Procain Injected Intraspinally.—In twelve of the fifteen cases studied by Achard the procain was eliminated between the second and third hours, and had all been recovered by the sixth hour. The maximum was always at the second hour. The cases in which the elimination proceeded more slowly were the only ones presenting headache.

Revue Médicale de la Suisse Romande, Geneva

March, 1919, 39, No. 3

*Laws on Building and Sanitary Inspection. E. Olivier.—p. 97.
*Undernourishment and Famine Edema. R. Guillermin and F. Guyot. —p. 115.
Dysentery in Southern Switzerland. M. Chapuit.—p. 120.
*Recovery from Multiple Tuberculosis. R. Burnand.—p. 127.

Ordinances on Building and Building Inspection.—Olivier discusses the proposed revision of the legislation on this subject, saying that the principle to be followed is that the rights of property are always subordinate to the rights of life.

Undernourishment and Famine Edema.—Guillermin and Guyot remark "Every physician now and then encounters a case of inanition; it may be an insane person, a cancer patient, a hysteric (or a suffragette) suffering from complete exhaustion from lack of food, but never, until 1915, would any physician have imagined that in the twentieth century he would ever behold the spectacle of famine ravaging whole populations, recalling the famous plagues of Egypt and the lamentable pictures described by our ancestors." Even in Switzerland physicians have noticed a general reduction in the weight of their clients, and the lesser proportion of cases of obesity. The scarcity of sugar and fats is mainly responsible for this. It recalls Erb's saying that with a course at Carlsbad in treatment of obesity, the fact that the meals are served à la carte, in extremely small portions, and at a very high price, explains the benefit from the stay there at least as much as the waters. They describe some cases of "famine edema" in French prisoners of war seen at Berlin and elsewhere, saying, "It suggested the clinical picture of a cardiac lesion with failing compensation. It affected mainly men who had to do heavy work on a ration of from 800 to 1,200 calories. These calories are drowned in food containing 15 per cent. and more of indigestible cellulose, with very little fat and a maximum of 50 gm. of albumin per day. The dropsy, anemia, apathy, muscular weakness and nervous exhaustion were associated with the *facies pestica*." Dogs are said to die when they lose 40 or 50 per cent. of their weight, but with the famine edema a loss of 40 per cent. was common. Digitalis has no influence on this edema. The number of fatal cases in Poland and elsewhere in which no tendency to scurvy was noted seems to indicate that it is a distinct morbid entity.

Recovery from Pulmonary Plus Intestinal Tuberculosis.—Burnand says that the case here reported teaches that in tuberculosis one must never give up hope, and that one may venture even quite hazardous operations when the patient is otherwise doomed. This patient was a woman of 27, and the pulmonary lesion seemed to be arrested by an artificial pneumothorax kept up for twenty-six months. The ten ulcerations found on the large intestine were excluded from the intestinal tract by severing the ileum 20 cm. from the valve of Bauhin, and reinserting it in the lower portion of the descending colon. After the laparotomy all the symptoms subsided and three years and a half passed with apparently perfectly restored health. Then came an intercurrent gastric fever and she wrote to Burnand that she had begun to cough and expectorate profusely and had fever and hemoptysis. He telegraphed her to return to his care at Leysin for another course of treatment. A large cavity was evident in the outer part of the right lower lobe and the pulse was bad. Several attempts to induce pneumothorax failed, while the general toxic condition was growing constantly worse during the two or three months while sanatorium treatment was vigorously applied. Then nine ribs were resected through an incision parallel to the spine, from 8 to 15 cm. being cut from each rib, under general anesthesia, with the aid of the pulmotor. The fever subsided almost immediately, and in three months no further tubercle bacilli were to be found, and at date of writing, eleven months later, the patient shows all the appearances of a clinical cure. Burnand ascribes the success of the plastic operation to the fact that the cavity was a grave localized suppurating lesion rather than a focus in full evolution.

Gazzetta degli Ospedali e delle Cliniche, Milan

April 3, 1919, 40, No. 27

*Complications of Influenza. F. Bindi.—p. 234.

Complications of Influenza.—Bindi describes both medical and surgical complications as he encountered them, including empyema, of which he has had 13 cases. Five of the patients died, including one with what seemed to be a metastatic peritonitis. All recovered in 10 operative cases of mastoiditis; one was in a child of 4. There were 3 cases of suppurating and 2 of nonsuppurating parotitis. Among the medical complications was a case of ulnar paralysis, one of paraplegia, and some of melancholia with ideas of persecution.

Riforma Medica, Naples

April 19, 1919, 35, No. 16

Artificial Pneumothorax and Thoracentesis in Treatment of Hemothorax. G. Bernabeo.—p. 310.
Ethyl Chlorid General Anesthesia for War Surgery. L. Caforio.—p. 313.
*Course of Typhoid and Paratyphoid in the Vaccinated. C. Pezzi. —p. 314.
Recent Literature on Traumatic Proliferation of Adipose Tissue in Knee. E. Aievoli.—p. 318.
Recent Literature on Cholesterol in the Blood. G. Moscati.—p. 319.

Course of Typhoid in the Vaccinated.—Pezzi reports that at Milan during 1917 the mortality among hundreds of soldiers with the typhoid bacilli found in the blood was 23.4 per cent. among those who had been given antityphoid vaccination while in the unvaccinated it was 27.8 per cent. In 1918 the corresponding figures were 18.5 and 14.7 per cent.

The death rate was thus slightly higher in the vaccinated over the two years. In one group of 124 vaccinated, 10 per cent. had relapses and only 2 per cent. in 104 nonvaccinated. The total mortality in the 438 cases of typhoid or paratyphoid or both together was 18 per cent. in the unvaccinated; 10.8 in the vaccinated. In the larger sense of typhoid plus paratyphoid, the mortality was reduced by the vaccination.

Rivista Critica di Clinica Medica, Florence

March 29, 1919, **20**, No. 13

*Radiologic Signs of Ascites. L. Siciliano.—p. 145.

April 12, 1919, **20**, No. 15

Bacillary Dysentery. A. Bizzarri.—p. 169.—Conc'n.

Radioscopy with Ascites.—Siciliano describes the roentgen picture seen when the loops of intestine are floating in a fluid. By raising the pelvis or turning on the side it may be possible to detect this floating appearance in some part of the abdomen when the intestines in other parts are bound down by adhesions. This radioscopy has to be done an hour or so after ingestion of the contrast emulsion.

Tumori, Rome

October-December, 1918, **6**, No. 4. Pub'd April 28, 1919

*Cytotoxic Serums and Tumors. P. Sisto.—p. 253.
*Experimental Tumors of the Brain. D. B. Roncali.—p. 269. Cont'n.
*Cancer of the Stomach. G. Perez.—p. 298.

Action of Cytotoxic Serums on Development of Tumors.—Sisto reports experiments on white mice inoculated with cancer after or at the same time with subcutaneous injection of a cytotoxic serum. The latter was obtained from rabbits that had been treated by intravenous injection of fresh spleen, testicle or liver tissue (triturated in saline) to produce a cytotoxic serum. The spleen-cytotoxic serum showed a pronounced action, the tumor grafts taking root and flourishing exceptionally well in these animals. This seems to indicate that one of the functions of the spleen is to protect against malignant growths. Brancati and Korentschewsky have reported experiments showing that an acquired immunity to tumors was lost after removal of the spleen. This was confirmed in Sisto's mice. Serafini has also reported similar experiences after ligation of the splenic blood vessels. Sisto reports further that liver-cytotoxic serum has a favoring action on tumor growth, while testicle-cytotoxic serum distinctly checked or prevented the growth of the malignant tumor cells. A large number of charts show the findings at different intervals.

Experimental Brain Tumor.—Roncali has published a large number of articles on the parasitic origin of cancer, and now reports that he has succeeded in inducing experimental gliofibro-endotheliomas in the brain. He offers this as a further contribution to the parasitic origin of carcinomatous growths. He introduced the endotoxins and exotoxins of blastomycetes inside the skull of twelve dogs. Actual carcinomas developed in consequence in the first group of five dogs, as he shows by the microscopic findings. In conclusion he emphasizes that the elements of cancer tissue represent at first merely a defensive reaction, but their biochemistry becomes so modified in their struggle for existence with the parasites that they acquire the properties of a parasite and take root anew wherever they may land. He is director of the Instituto di Patologia Speciale Chirurgica of the University of Padua.

Resection of Stomach for Cancer.—Perez reports the ultimate outcome in 12 patients of 20 given operative treatment in 1913-1914 for gastric cancer. There was nothing to suggest syphilis in more than 2 and alcohol could be incriminated only in 3. In the majority there was a history of chronic gastric disturbance, suspicious of gastric ulcer in some cases, polyposis in one, but in no case was there a history of trauma. The father of one woman had died of gastric cancer and the mother of one man of esophageal cancer; in 2 others there was a family history of gastric ulcer. He gives a minute study of the anatomic lesions found as compared with the symptoms, the functioning of the stomach, the radioscopic findings and the ultimate outcome. The results of his extensive resection were very encouraging. Even those in advanced cachexia bore the operation well. One of the patients succumbed to pneumonia, which is the most to be dreaded of all operative complications. One woman in profound cachexia seems in ruddy health now, a year later. A palliative gastro-enterostomy in inoperable cases may be followed by quite long survival as some cancers are very slow in growth.

Brazil-Medico, Rio de Janeiro

March 22, 1919, **33**, No. 12

*To Correct Retrodeviation of the Uterus. J. Adeodato.—p. 89.

Ligamentary Hysteropexy.—Adeodato declares that the Alquio-Alexander-Adam operation by way of the inguinal canal is not surpassed by any other technic from the anatomic and physiologic standpoint. But when the uterus requires operative measures to bring it into its normal position, the shortening of the ligaments is best done through an abdominal incision. For this, he endorses a modification of Gilliam's method which avoids the danger of possible ileus that is liable with the Gilliam (or Doléris) technic. It occurred in one of his cases nine days after the operation. A loop of intestine had slipped down into the pocket formed in front of the uterus by the round ligament sutured to the aponeurosis of the rectus muscle in the Gilliam operation. The operation otherwise always gives ideal results. To avoid this drawback, he fastens the vertex of the loop of the round ligament not to the median line but to the side of it, striving to keep the fundus of the uterus apart from the incision in the peritoneum, to prevent development of adhesions. If the angle of flexion will not yield to this moderate shortening of the ligaments, he prefers to supplement it with an operation on the isthmus rather than to bring up the fundus too close to the sutured incision in the peritoneum. Local and general treatment before and after the operation is necessary to free the patient from all her chronic disturbances from retrodeviation.

Medicina Ibera, Madrid

March 15, 1919, **6**, No. 71

Radium Treatment of Superficial Cancer. E. A. Sainz de Aja.—p. 229. Continuation.
*Placenta Praevia Plus Eclampsia with Recovery. J. P. Brihuega.—p. 233.
Calculus in the Urethra: Three Cases. C. de San Antonio.—p. 235.

Placenta Praevia Plus Eclampsia.—Brihuega's patient had only recently recovered from influenzal pneumonia at the seventh month of pregnancy. It had been treated with mercuric chlorid by the vein and the following month profuse hemorrhages and eclampsia compelled premature delivery. The child was born in asphyxia and died in two hours.

Plus Ultra, Madrid

December, 1918, **1**, No. 6

The True Mechanism of Skiascopy. M. Márquez.—p. 299. Conc'n.
Simplified Technic for Wassermann Test. J. Sievert.—p. 305.
Classified Abstracts with Specialist Comment.—p. 308, etc.
Sections of Bundle of His. Calandre y Carrasco.—p. 314
*Dentition. E. Suñer.—p. 320.
Spinal Anesthesia. F. Herrer.—p. 326.
*Radium Treatment. L. R. F. Sierra.—p. 334.
*Radiologic Diagnosis of Gastric Cancer. E. P. Guillén.—p. 336.
*Extraction of Bullet in Parietal Lobe. W. L. Albo.—p. 347.
Prevailing Epidemics at Sevilla. A. Salvat.—p. 350.
Teaching of Legal Medicine in Spain. Lecha-Marzo.—p. 354.

Teething.—Suñer reiterates that the teething period in infants is not pathologic but is a period of stress and adjustment, like puberty and the menopause. Inherited taints may first make themselves manifest at such periods, and various pathologic conditions otherwise may prove refractory to all treatment until the stress of this critical epoch is somewhat mitigated.

Radium Treatment of Superficial Cancer.—Sierra relates that he has realized a complete cure in the last eight years in all but three of the more than 100 cases of epithelioma of the skin in which he has applied radium treatment. The three refractory cases had been previously given roentgen treatment and had had a radiodermatitis. He gives the details of a few typical cases, and warns that roentgen treatment may aggravate the cancer, and it is then extremely difficult to arrest its course.

Radiologic Diagnosis of Gastric Cancer.—Guillén gives a number of colored illustrations showing the interpretation of the various roentgen findings.

Bullet in Parietal Lobe.—Albo relates that the hemiparesis and dysarthria subsided after removal of the bullet from the left parietal lobe under roentgen control. The case is illustrated.

Prensa Médica Argentina, Buenos Aires

March 30, 1919, **5**, No. 30

*The Schick Reaction. P. de Elizalde.—p. 293.
*Tuberculin Tests of Recruits. J. A. López.—p. 295.
Tuberculoma in Gallbladder. P. M. Barlaro and E. Olivieri.—p. 297.
Association of Ameba and Trichomonas. Barlaro and Mujica.—p. 298.
Nerve Elements in Auriculoventricular Bundle. P. Rojas.—p. 299.

The Schick Reaction.—De Elizalde applied the Schick test to 673 children in an asylum and to 221 in a children's hospital and compares the findings with those reported by Kolmer and others in The Journal. He classifies the reaction by ages, commenting on the negative reaction in very young infants as evidently due to the infants' sharing the mothers' immunity. This transmitted immunity is gradually lost, so that by the age of 3 the maximum of reaction is obtained. After 3, natural immunity is acquired so that only from 5 to 15 per cent. of adults give a positive response to the Schick test. The reliability of the test is confirmed by the experience that in the whooping-cough ward 15 of the children gave a positive reaction and the other 23 showed no response. Diphtheria was imported into the ward but only 5 of the children contracted it and these were all in the positive group. His experiences confirm the harmlessness of the Schick test, and also the absolute independence of the reaction from the condition of the general health. The presence of other acute or chronic infectious diseases does not seem to modify the reaction.

Tuberculin Test for Recruits.—López has adopted Vitón's method of extremely minute doses of tuberculin in testing for and treating pulmonary tuberculosis in recruits, and lauds the fine results obtained. It is possible by this means to weed out the tuberculous new arrivals, and to cure many of the soldiers. (Vitón's extremely minute doses were described in these columns recently, page 1581.) López insists that this method of ultra small doses of tuberculin at four day intervals can be applied by any practitioner and the results to date have nearly always surpassed all anticipations.

Progresos de la Clínica, Madrid

February, 1919, **7**, No. 74

*Trench Fever. A. Piga and L. Lamas.—p. 49.
*Reconstruction of the Face. A. Cortés Lladó.—p. 64.
*Eclampsia and Evacuation of the Uterus. Vital Aza.—p. 89.
*Syphiloma of the Eyelids. F. Couce and F. Poyales.—p. 92.

Trench Fever.—Piga and Lamas review the various publications on trench fever (Wolhynia fever, five day fever) and emphasize that it may appear elsewhere than in the trenches, and that physicians should be on the alert to recognize it. They do not regard the means of transmission of the disease as having been definitely ascertained although transmission by lice is most probable. Treatment to date can be only symptomatic.

Reconstruction of the Face.—Lladó's twenty-five illustrations show the guiding principles in treatment of deformity resulting from war or other wounds of the face. He describes the French, Italian and other methods of plastic facial surgery, specifying the class of indications for each. He studied the methods directly in the hospitals in France and elsewhere.

Eclampsia and Evacuation of the Uterus.—Aza remarks that evacuation of the uterus removes the source of the toxins but does not suppress the toxins circulating in the body fluids and the toxins fastened in the tissues. Hence evacuating the uterus is not certain to arrest the convulsions. The convulsions may even develop for the first time after delivery, or the woman may die after delivery before the convulsions have had time to develop. When the practitioner is confronted with a case of eclampsia in a woman on the point of being delivered, he should of course hasten delivery if the cervix is sufficiently dilated. But the general practitioner, in the home, is not able always to do cesarean section at a moment's notice, and the injury to both mother and child from forcible extraction through the imperfectly dilated cervix is such that the remedy is worse than the disease. Hence Aza insists that the practitioner should sometimes concentrate his efforts on medical measures, venesection, morphin, etc. He should not attempt surgical measures unless they can be rapid and harmless.

Syphilitic Lesions in the Eyelids.—A large color photograph reproduces the tertiary syphilitic lesion of the inner angle of both eyes, an actual syphiloma in the right eye. The man of 40 has two healthy children; the primary chancre was acquired at 30 and given a course of mercurial treatment. There had been no other signs of syphilis until these lesions in the eyelids developed.

Reforma Médica, Lima.

April, 1919, **5**, No. 56

Malta Fever in Lima District. R. Flores.—p. 54.
Eugenization of America. C. E. Paz Soldan.—p. 54.

Repertorio de Medicina y Cirugía, Bogotá

April, 1919, **10**, No. 7

*Umbilical Hernia. J. M. Montoya.—p. 338.
The Vitamins. E. Gómez.—p. 348.
*Syphilis of the Nervous System. E. Campo.—p. 364.

Umbilical Hernia.—Montoya discusses umbilical hernia in children, saying that it is more common than inguinal hernia but, owing to the tendency to a spontaneous cure, it seldom reaches the surgeon. He has operated in thirty-two cases in the last six years. He found in one cadaver that the intestines had formed a hernia into the cord at birth; in such a case the bowel should be reduced at once and the cord ligated. For ordinary umbilical hernia, after reducing the hernia, he straps two-thirds of the abdominal wall with adhesive plaster, first taking up a fold the entire thickness of the wall, with the umbilicus and hernia in the depths of the fold. The adhesive plaster holds the fold firm, allowing the ring a chance to heal. The plaster is renewed by the physician himself every week or two; the child can be bathed as usual in the interim. This method obviates any danger of stretching the ring, which is liable when a small pad is used. He adds that these mechanical measures have to be long kept up; a year is none too long, provided the ring and the hernia show no tendency to grow larger. With careless or negligent parents and when the hernia is exceptionally large, operative measures are preferable and he reviews the various technics available. He applied Mayo's method in eight cases, including one in which the girl of 7 had a return of the hernia six months after it had been treated by merely resecting the ring and freshening the edges of the muscle. He never uses general anesthesia for it in young children; the operation is completed in about six minutes. He gave the older children a few whiffs of ethyl chlorid to supplement the local anesthetic.

Syphilis of the Nervous System.—Campo remarks that he often encounters persons who are victims of tabes or other syphilitic affections of the central nervous system who yet had taken supposedly thorough treatment according to the older methods. The action of the syphilis virus is sometimes reenforced by certain predisposing factors such as an inherited taint, fatigue of the brain and spinal cord, preexisting intoxications, traumatism and cold. These predisposing causes explain why nervous syphilis is more apt to develop between 20 and 40, is more frequent in men than in women, and is more prevalent in the city than in the country. The evidence on hand seems to indicate that the nervous system becomes infected during the secondary period. A mild meningitis may exist for years without making itself manifest, but it may induce infiltration in the meninges close to the posterior roots, and this may entail the clinical picture of tabes from the degeneration which follows the compression of the roots. He reviews the clinical picture of cerebral syphilis, and outlines our knowledge on the subject.

Semana Médica, Buenos Aires

March 27, 1919, 26, No. 13

*Serotherapy of Tuberculosis. J. Howard.—p. 305.
General Review of Congestions of the Uterus. Castaño.—p. 313.
*Technic for Resection of Megacolon. A. G. Gallo.—p. 318.
*Postoperative Dilatation of Stomach. O. Copello.—p. 323.
The Bases of a Scientific Education. J. Méndez.—p. 325.

Serotherapy of Tuberculosis.—Howard explains that the bacterium acts on the cells gradually, and in time trains them to produce antibodies. We have thus a durable immunization. Toxins, on the other hand, make a sudden, violent attack on the cells, and a chemical neutralization may follow, but the cells do not get trained, and consequently the immunization is comparatively transient. Vaccination against smallpox lasts for years, while vaccination with an antitoxin protects for only a few months. Immunity, he reiterates, is a process of cellular pedagogy. To realize it, he prepares an antiserum by successive passages of antigens and antibodies through animals, keeping always below the level of supersaturation. A number of cases of tuberculosis are described given a course of this antiserum treatment with very promising results. Full details of the preparation of the antiserum are to be given in a later article. He published in 1916 similar experiences with an antiserum for typhoid but explains that the brief course of typhoid does not allow time for the education of the cells.

Operative Treatment of Megacolon.—Gallo's remarks apply to removal of the sigmoid-rectal portion of the large intestine. He advocates both an abdominal and a perineal incision, and reviews the preferable technic with either long or short colon and mesentery.

Acute Dilatation of the Stomach.—Copello describes the case of a man of 50 requiring an interval appendicectomy that did not take over twenty minutes. The next day severe symptoms of acute dilatation of the stomach developed. The forty-fourth hour after the operation the stomach was rinsed out and the patient was turned to lie on his stomach. The vomiting stopped, but the symptoms returned again later, and yielded anew to the same measures. The pulse kept good throughout and there was no tachycardia. The vomiting was uncontrollable and the vomit was bloodstained at first. Peritonitis was excluded by the absence of pain and tenderness in the abdomen, although the fever suggested peritonitis, especially on the third and fourth days, but it subsided each time after lavage of the stomach. On account of the appendicectomy incision, he refrained from postural treatment except when absolutely required.

Siglo Médico, Madrid

April 12, 1919, 66, No. 3409

*Hemorrhages. A. Morales.—p. 289.
Advantages of Mountain Sanatoriums for the Tuberculous. B. H. Briz.—p. 292.
Chrysophanic Acid in Dermatology. Sicilia.—p. 293.
Introduction to Study of Operative Surgery. J. G. Capdevila.—p. 294. Cont'n.

Hemorrhages.—Morales describes a number of cases of alarming hemorrhage and the various means he improvised to meet unusual conditions. In one case the vessel broke on which an obese woman had seated herself, and the jagged edges of the fragments cut one of the external pudic arteries. Nothing arrested the hemorrhage until with a large curved needle, threaded with silk, the ends of the artery in the wound were brought together by this *acufilopresion* as he calls it. In one hemophiliac the hemorrhage after extraction of a molar resisted all measures until the cavity was seared with the actual cautery. Even this failed on another occasion, but the hemorrhage was finally arrested by *acufilopresion*, passing the silk over two segments of rubber tubing after lining the cavity with a fold of mucosa from the inside of the cheek. The loop of silk embraced all the mucosa surrounding the alveole. He has found hamamelis a valuable adjuvant in treating rebellious hemorrhage. It seems to act both by inducing coagulation and by contracting the muscular fibers of the blood vessels. In experiments on a dog, the femoral artery on each side was severed, and the hemorrhage arrested at once by application of a bag of ice on one side and by the hamamelis extract on the other. Then he applied a hot compress to the abdomen; this started up the hemorrhage anew on the ice-bag side, but not on the hamamelis side.

Mededeelingen u. h. Genessk. Laboratorium te Weltevreden, Java

1919, No. 1

*Chenopodium Cultivated in Java. P. C. Flu, C. D. de Langen and F. Weehuizen.—p. 1.

Java Chenopodium.—The experiments on dogs and the clinical experiences related testify that a variety of *Chenopodium ambrosioides* grown in Java, has a very powerful expulsive action on ankylostomas in man and dog. It should be followed with a laxative in two or three hours. All the dogs examined in Java were found infested with *Ankylostoma caninum.*

Nederlandsch Tijdschrift v. Geneesk. Amsterdam

March 8, 1919, 1, No. 10

The Medical Course in England. G. Van Rijnberk.—p. 746. Cont'n.
*Racemose Phlebosarcoma. A. Van Ree.—p. 759.
*Treatment of Placenta Praevia. G. C. Nijhoff.—p. 768.
Embolism of Pulmonary Artery. A. J. Krijger.—p. 776.

Racemose Phlebosarcoma.—Van Ree's patient was an otherwise healthy woman of 42; the sarcoma in the leg resembled in every respect a group of thrombosed varicose veins. The woman had noticed for some years a small bunch on the inside of her left leg, but for a long time there was no pain. The conglomerate of what looked like thrombosed veins was finally resected, but the contents proved to be sarcomatous, and the leg was amputated. There has been no sign of recurrence during the fifteen months to date. Illustrations are given of this peculiar racemose spindle-cell sarcoma, evidently starting in the intima of the vein, and the case is compared with the few other cases on record of cancer starting in a blood vessel.

Placenta Praevia.—Nijhoff analyzes the experiences in 160 cases of placenta praevia at Groningen since 1898. The mortality of the women was 8.2 per cent. and in four of the thirteen fatal cases the woman was nearly exsanguinated when first seen. The death rate of the children was 44 per cent. These figures compare favorably with Doederlein's compilation of 5,615 cases with 8.05 per cent. mortality for the mothers and 54 per cent. for the children. The lessons learned from this material impress the advantages of cesarean section in serious cases with profuse hemorrhage at the beginning of the first stage of labor. Otherwise it is better to follow the old method of rupturing the membranes, with version, when the os is well dilated. We may well be content if we can get the mortality of the mothers reduced to 5 or 6 per cent. and that of the children to 25 per cent. The details of his cases are tabulated.

March 15, 1919, 1, No. 11

The Medical Course in England. G. Van Rijnberk.—p. 821. Cont'n.
*Sinusal Arrhythmia. W. C. Aalsmeer.—p. 825.
*Coccobacillus Process on Hand. W. L. L. Carol.—p. 835.
*Inhibition of Agglutination by Fresh Serum. H. G. M. Dikshoorn.—p. 843.
Certain Requirements for Practice. I. C. Idenburg.—p. 846.

Sinus Arrhythmia.—Aalsmeer reviews the literature on this subject and describes in minute detail a case in which slight tachycardia was accompanied with sinus arrhythmia evidently traceable to some infectious process. Under digitalis the sinus arrhythmia grew worse and the conduction of the impulse became defective until the drug was dropped. Both the accelerator and the vagus systems seemed to be functioning perfectly, and the cause of the disturbances was evidently some change in the reacting organ itself. The prognosis in this tachycardia form is not so grave as in cases with bradycardia. With the latter, the heart action might become completely arrested.

Superficial Infectious Gangrenous Process.—The gangrenous process on the back of the hand of a man of 60 was traced to symbiosis of *Staphylococcus aureus* and *Bacterium lactis aerogenes.*

Inhibition of Agglutination Test by Fresh Serum.—Dikshoorn discusses van Loghem's assertion that the inhibition which sometimes occurs when fresh serum is used for the agglutination test is due to the presence of some nonspecific substance. By heating or by letting the serum age, this inhibiting effect is overcome. Dikshoorn's experiences with the blood of men vaccinated against typhus showed that the inhibiting action was most pronounced the greater the agglutinating potency. This suggests that probably the increase in the agglutinating property is due to an increase in the amboceptor content and that this, in connection with the complement, in a strong concentration prevents the binding of the agglutinins. With fresh serum there seems to be a mutual binding of amboceptor, complement and antigen which interferes with agglutination.

Hygiea, Stockholm

March 31, 1919, **81**, No. 6

The Food in Germany During the War and at Present. J. E. Johansson.—p. 257.
*Transmission of Influenza. L. Ehrenberg.—p. 297.

Transmission of Influenza.—Ehrenberg discusses the possible reasons why in the Falun hospital 90 per cent. of the personnel developed influenza as a total of 143 influenza patients were being treated, while none of the other patients in the hospital contracted the disease. Linroth attributes their escape under these circumstances to a kind of immunization, but Ehrenberg thinks it is more plausible to assume that the lack of repeated opportunities for infection is the more probable decisive factor.

Svenska Läkaresällskapets Handlingar, Stockholm

March 31, 1919, **45**, No. 1

*Dietary in Large Hospitals in Sweden. S. Köhler.—p. 1.

The Food in Large Hospitals.—The eighty-two pages of Köhler's study of the various hospital diets, the waste, and proposed improvements are accompanied by numerous tables.

Ugeskrift for Læger, Copenhagen

April 17, 1919, **81**, No. 16

Influenza and Pulmonary Tuberculosis. C. H. Würtzen.—p. 673.
*Influenza in Iceland. V. Erlendsson.—p. 683.

Influenza in Iceland.—Erlendsson cites experiences at Iceland showing that the severe epidemic of influenza which befell the land in November, 1918, did not differ materially from the disease as observed elsewhere, and it spread in the same universal manner as in other countries, apparently regardless of isolation and quarantine.

April 24, 1919, **81**, No. 17

*Contusion of a Hernia. S. Hindse-Nielsen.—p. 713.
Total Pneumothorax Without Symptoms. H. Lindholm.—p. 723.
Health Record of Famous Romans. E. Ravn.—p. 735. Conc'n.

Contusion of Hernia.—Hindse-Nielsen reports four cases of rupture of the small intestine from contusion of a hernia. Only one of the patients survived the resulting peritonitis. The danger of such an eventuality should turn the scale in favor of operative treatment of simple hernia. The prognosis of rupture of the bowel in the hernia is somewhat better than rupture otherwise, if the herniated loop does not retract into the abdomen. He cites some statistics showing spontaneous recovery in 4 per cent. of 200 cases and recovery after operation in 28 per cent. of 469 operative cases. In any event, a trauma in the region of a hernia calls for extremely careful examination and exceptional caution.

Upsala Läkareförenings Förhandlingar

Sept. 10, 1918, **23**, No. 5-6

*Lymphogranulomatosis of Tuberculous Origin. C. Näslund.—p. 229.
*Determination of Solid Contents of Urine. G. J. Blohm.—p. 283.
*Change in Size of Arm under Massage. S. Arnell.—p. 307.
*Action of Massage on the Vessels. R. Friberger.—p. 315.
Action of Artificially Carbonated Baths. T. Sondén.—p. 350.
Simultaneous Vision of Contrasting Colors With Abnormal Trichromatic Vision. C. Grill.—p. 367.
*Stain for Diphtheria Bacilli. U. Quensel.—p. 384.
Influence of Massage on Pulse and Blood Pressure. R. Friberger.—p. 387.

Tuberculous Origin of Lymphogranulomatosis.—Näslund found nothing to suggest a tuberculous origin at necropsy of a typical and extreme case of lymphogranulomatosis in a boy of 4. None of the internal organs or tissues showed any changes even suspicious of tuberculosis. An emulsion of one of the lymphogranulomatous mesenteric glands was injected into the peritoneum of two guinea-pigs and both died of generalized tuberculosis. The tubercle bacilli found in the guinea-pigs were true to the human type, as also those recovered from white mice and rabbits also inoculated with glandular tissue from the lymphogranulomas. The lesions found in the animals corresponded to those induced with ordinary human tubercle bacilli, but some of the rabbits developed also certain changes which seemed to resemble in every respect typical lymphogranulomatosis, along with the ordinary typical tuberculous changes. The extensive researches reported, with four pages of bibliography, set solid, all tend to confirm the assumption that lymphogranulomatosis is a form of tuberculosis, the individual reacting forces determining the form in which the disease manifests itself. The tubercle bacilli involved are not necessarily attenuated in virulence.

Determination of Solid Contents in Urine.—Blohm's research seems to demonstrate that the refractometer technic gives more reliable findings than the specific gravity or other coefficients. In the sixty-three samples of urine tested, free from albumin and sugar, the range of solid contents was from 4.9 to 72 gm. per liter.

Effect of Massage on the Vessels.—Arnell has the arm placed in a cylinder of water before and after massage, the displacement of water indicating whether the arm has increased in size under the massage. Very little difference was apparent, and even this was not constant. The tests were made on fifteen persons from 18 to 27 years old, including eight healthy subjects.

Friberger's extensive experiments confirm that the slowing of the pulse and the hyperemia when an extremity is given a hot air bath far surpass what can be induced in this line by packing the extremity with hot sand bags; the effect with the latter of equally prolonged action (fifteen minutes) is very weak in comparison, and even this was realized only in 33 per cent. of the twelve persons tested. The diversity of the response in different persons to the tests was striking. Friberger reports also the effect on the systolic blood pressure and pulse rate of mud baths and soap massage baths. In six healthy young men no effect in this direction was apparent, but in fourteen persons from 20 to 63 years old, with chronic rheumatism, sciatica or polyneuritis, there was often a moderate rise in the blood pressure. There seemed to be some connection between the degree of pain induced by the massage in these cases and the amount of the increase in the blood pressure. He theorizes to explain this, and adds the practical warning that the possibility of thus raising the blood pressure should be borne in mind in cases in which there is reason to fear cerebral hemorrhage.

Simplified Stain for Diphtheria Bacilli.—Quensel says that with this stain all the slides with the smears can be left standing in the jar holding the stain until convenient to examine them. The stain keeps well, and the jar of stain can be used over and over again for months. It stains the nucleus as instructively as the Neisser contrast stain. He adds to a concentrated aqueous solution of methylene blue an equal amount of a 10 per cent. aqueous solution of cadmium chlorid. A precipitate is thrown down, and this precipitate is dissolved in water, when it is at once ready for use. The loopful of the culture is spread in a drop of the stain on a slide and air-dried, then placed in the jar of the stain for from two to five minutes or longer. It is then rinsed with water and treated for fifteen seconds with Lugol's solution, and rinsed again.

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PROGRESS IN OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY *

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CHICAGO

The honor you have conferred on me and the confidence you have expressed in electing me to this office are greatly appreciated. Your indulgence for any errors I may unwittingly commit and your assistance are earnestly solicited.

We are honored by the presence of distinguished surgeons from allied countries. We extend them a sincere welcome and a cordial invitation to participate in our discussions.

This is the Victory Meeting of the American Medical Association. It is an occasion for great rejoicing. Democracy has defeated autocracy. The chief victory celebration is scheduled for our general meeting; it is fitting, however, to make brief mention of the important part taken by members of this section. We point with pride to the vast numbers that rendered meritorious service. We rejoice that most of them have returned to their homes and civil duties. We hold sacred the memory of those who made the supreme sacrifice; we extend to their bereaved ones our sympathy, and pledge them our service.

The radical changes that have taken place in the titles and subject matter of contributions to the literature of gynecology, obstetrics and abdominal surgery during the last few years emphasize the fact that much knowledge has accrued and much chaff has been eliminated. Many of the subjects that were of much value and interest in the making have ceased to furnish opportunities for brilliant, and, at times, acrimonious discussion.

RECENT ADVANCE

A few examples of notable achievements will be touched on in order to illustrate the great advancement which has taken place in our specialties. Much has been accomplished in plastic surgery for the cure of cystocele, uterine prolapse, and rectocele. Operations for complete lacerations of the perineum and for vesicovaginal fistulas are relatively simple and efficient, when flaps are utilized and free separation of tissues, by blunt dissection, is made to obtain approximation without tension.

The importance of lacerations of the cervix has been determined to be chiefly its relation to erosions and leukorrhea. The investigations of Hitschmann and Adler, Sampson, and Curtis have demonstrated that curettage of the uterus is of little value except for diagnostic purposes, and is often attended by considerable danger, especially in septic cases.

The various operative procedures for retrodisplacement of the uterus have lost much of their interest; uncomplicated displacements have been found to be of little pathologic importance. A uterus so crippled that it cannot participate in reproduction should not be suspended; it is then useless and a menace to health.

The treatment of acute pelvic infections has made notable advances. It has become chiefly medical; surgery is largely reserved for relief from the residues of infection. This is especially true of acute puerperal infections. The chief danger to life in acute puerperal infections, excluding virulent streptococcus cases, has been found to be meddlesome, aimless, useless and dangerous traumatisms. Studies of nonoperative treatment of acute pelvic infections has long since revealed much knowledge of the important subject of acquired immunity. This achievement of the gynecologist has exerted an extensive and beneficent influence in the treatment of acute infections in all of the surgical specialties. These principles of treatment have of late been adapted to acute infections of the chest.

We can point with great pride to the accomplishments in abdominal surgery, especially to the fact that much important pathology was discovered by the abdominal surgeon—notably the pathology of the ovaries, fallopian tubes, appendix, gallbladder, and duodenal ulcer.

Study of the ductless glands has elucidated much hitherto obscure symptomatology of gynecologic cases, and has opened up a fertile field for further investigation.

Radium has proved to be a remedy of great value, as will be demonstrated by papers to be presented before this section.

OPPORTUNITIES FOR FURTHER PROGRESS

Notwithstanding all that has been accomplished, there remain many opportunities for research and improved surgery. Daily observations reveal the fact that much poor pelvic and abdominal surgery is done. Results are often disappointing. Subsequent surgery is often required.

Abdominal sections should have definite indications, and when performed, enough should be done to give assurance of a cure. Surgical tinkering with the ovaries, tubes and intestine is often a failure, and is frequently followed by disturbances necessitating further operation; such cases require very thorough study before surgical interference is resorted to. The character of the surgery in abdominal operations is too

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* Chairman's address, read before the Section on Obstetrics, Gynecology and Abdominal Surgery at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

often exclusively determined by the pathologic condition found, instead of being adapted to the individual requirements. Similar pathologic conditions often produce very different symptoms in individual cases. The age, social status, and general health are also often important factors in determining the operative indications. It is highly important for the surgeon to have in mind an accurate history of the patient at the time of operation. I am convinced that the surgeon should keep the patient under observation after operation until the cure is complete. This is especially important for the neurasthenic type of patient.

No adequate opportunity is offered for the development of the younger surgeon. He is too often obliged to learn by independent practice. Assistantships and fellowships for selected men should be established in all of the larger hospitals. The time best suited for such study and development would be at the end of their internships. Many of these men are forced into general practice and commercialized medicine to gain a livelihood.

Division of labor by the surgical staff of most of the larger hospitals would result in much increased efficiency. An excellent example of this is found in the organization established by Halstead at Johns Hopkins, which has proved its efficiency by the development of men prominent in specialized surgery. His organization limits the field of work, permits intensive study, and supplies enough clinical material for extensive investigation.

Brain surgery well illustrates the advantage of such division of work. It should be done by one. The amount of material would be enough to develop one surgeon efficiently, but would be of very little value if distributed to all of the attending surgeons.

Examples of lack of organization are illustrated in the annual reports of most of our larger metropolitan hospitals. One large hospital, which has very little specialized surgery, publishes a volume of detailed technic of organization. Among the history forms is one of twelve pages for gynecology—a twelve-page, "rubber stamp" type of history for pelvic diseases in the female. It is not necessary to tell you that this hospital has no department of gynecology and abdominal surgery. None of us would employ such a history form for gynecologic cases. We might, however, have a form of twelve or more pages of history for nervous diseases, for diseases of the ear, or for any group of diseases which we are not competent to treat, but not otherwise.

Another hospital of about like size and character has a gynecologic department for the care of ambulatory patients, but no such special department for the care of hospital patients—an arrangement which does not suggest an organization established for efficiency. Both of these hospitals have medical college affiliations which have departments of gynecology. The inference would be that they consider specialists necessary for teaching but not essential for practice. These may be extreme cases but are illustrative of much of the lack of hospital organization. The men who are responsible for these conditions not only limit the usefulness of their institutions but restrict their own development.

The establishment of groups for surgical work is progressing and exerting a beneficial influence for better surgery. It is extending specialized surgery to the smaller communities. The combination of talent should bear the same relation to surgery that the combination of capital does to the industries. Such organizations in medicine should be for increased efficiency and not for increased profit. Organized groups established in large cities would result in much increased efficiency by development of more specialized surgeons. Organized groups would relieve the individual surgeon of annoying, time-consuming financial and other details, and would materially lessen commercialism. Groups could be of vast economic value by conservation of accrued accomplishments.

Much has been said relative to the practice of surgery by men with insufficient training. It is not my purpose or intent to offer any excuses for them, but to call attention to the fact that some of the responsibility for poor surgery rests elsewhere, especially with the men accountable to medical institutions of learning.

104 South Michigan Avenue.

CALCIUM CHLORID AS A PALLIATIVE AGENT IN THE TREATMENT OF INTESTINAL TUBERCULOSIS

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NEW YORK

With the exception of dysphagia and dysphonia due to laryngeal implication, the intestinal symptoms of tuberculosis are the most painful to endure and most difficult to control by our present methods of symptomatic and palliative treatment of the disease. In the advanced stages of phthisis, we very frequently encounter patients who beg for relief of the abdominal pains, exhausting diarrhea and tenesmus. These unfortunates, in despair of ever being completely cured of their malady, often state that if these intestinal symptoms were but controlled, they would be happy; but, unfortunately, until recently we have been practically helpless in many cases. The various astringents, metallic, mineral and vegetable, often prove of little or no value; the administration of silver nitrate, lead, bismuth and tannin and its derivatives, in moderate or large doses, has proved futile in the vast majority of cases; and dietetic treatment is only exceptionally effective in checking the frequency of the stools. Only large doses of opium or its derivatives are at times productive of a semblance of relief; but no sooner are the opiates stopped, often because of the appearance of untoward effects, than the diarrhea reappears, at times more severe and exhausting than before. Since between 30 and 50 per cent. of patients with advanced and active tuberculosis suffer from intestinal complications, it is clear that anything that will relieve these symptoms is a welcome addition to our armamentarium.

About six months ago, Saxtorph[1] published his results with the intravenous injection of calcium chlorid in intestinal tuberculosis. An abstract[2] of Saxtorph's paper was published in The Journal, and inquiries, asking for details of the treatment, were soon published,[3] showing the keen interest of those who have tuberculous patients under their care. Having given this method a trial in my hospital and private practice, I believe that my observations of the action of calcium chlorid in diarrhea of the tuberculous warrant its recommendation as a valuable therapeutic agent in the treatment of this symptom.

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[1] Saxtorph: Ugesk. f. Læger **80**: 1763 (Nov. 7) 1918.

[2] Calcium Chlorid by the Vein in Intestinal Tuberculosis, abstr., J. A. M. A. **72**: 234 (Jan. 18) 1919.

[3] Calcium Chlorid in Intestinal Tuberculosis, Queries and Minor Notes, J. A. M. A. **72**: 443 (Feb. 8) 1919.

In some cases, Saxtorph's results were fully confirmed. The gastro-intestinal symptoms were almost completely relieved by a single injection of a 5 per cent. solution of calcium chlorid into a vein. The following cases are representative of this result:

REPORT OF CASES

Case 1.—R. G., aged 20, admitted to the hospital, Nov. 20, 1918, had a moderately advanced pulmonary tuberculosis involving both lungs, with fever, cough, night sweats, etc. Gastro-intestinal symptoms were a feature in this case, the patient complaining of severe abdominal pains and diarrhea, from six to eight movements of the bowels occurring daily, and fluid and ill-smelling material being expelled. The symptoms pointed to intestinal ulcerations, but there was no evidence of amyloidosis. The usual treatment with tannin, opium, etc., was not effective in giving the patient the desired relief. Feb. 15, 1919, 5 c.c. of a 5 per cent. solution of calcium chlorid were injected into the median basilic vein. Within several hours the abdominal pains disappeared, and the diarrhea was ameliorated. Only two movements of the bowels a day occurred after the treatment was applied, and the stools became semisolid. The improvement has lasted for more than three months, during which only dietetic measures have been enjoined.

Case 2.—A. B. K., a man, aged 37, admitted to the hospital, Nov. 19, 1918, had symptoms and signs of moderately advanced pulmonary tuberculosis, both lungs being affected. Soon after admission the patient complained of severe abdominal pains and constipation. The usual mode of treatment of these symptoms was not effective in giving him relief. In fact, the abdominal pains increased in intensity and diarrhea made its appearance, from six to eight loose movements occurring during twenty-four hours.

An intravenous injection of calcium chlorid was administered. Immediately after the injection, the patient felt a severe burning pain in the arm and over the precordium, and went into collapse. Stimulating medication revived him, but the pain in the arm continued for two days, when it finally subsided. The intestinal symptoms were, however, completely relieved. The abdominal pains and the diarrhea disappeared, the bowels moving only once or twice daily and the stools being well formed. No repetition of the treatment has been necessary for three months.

Case 3.—M. M., a man, aged 30, admitted to the hospital, March 5, 1919, though showing symptoms and signs of extensive tuberculous lesion in both lungs and a perforated ulcer of the nasal septum, had no severe constitutional symptoms of phthisis. His most urgent need was relief from the gastro-intestinal symptoms, abdominal pains and diarrhea, from four to six loose and watery stools being evacuated daily. There were no signs of amyloidosis. An injection of 5 c.c. of calcium chlorid intravenously was effective in improving his condition. The pains in the abdomen became milder, the movements of the bowels diminished to two a day, and the patient has been feeling quite comfortable for two months.

It appears that in some cases a single injection of the calcium chlorid is insufficient to effect relief of the gastro-intestinal symptoms and a second injection is indicated, as illustrated by these cases:

Case 4.—C. B., a man, aged 28, admitted to the hospital, March 9, 1919, had extensive bilateral tuberculous involvement of the lungs with signs of excavation; the larynx was also involved in the tuberculous process. The patient stated that since October, 1918, gastro-intestinal symptoms had tortured him—abdominal pains and diarrhea, with from four to six stools daily. March 15, 1919, 5 c.c. of calcium chlorid were administered intravenously. Relief of the abdominal pains was noted within a few hours, but the improvement in the diarrhea was not so pronounced. The number of stools was reduced to two daily, but they still remained loose. This improvement continued for about two weeks, when the old symptoms, abdominal pains and diarrhea, returned with the same severity as before the treatment was administered. Another injection of calcium chlorid was made and the diarrhea has been checked, not reappearing for two months. As long as the patient avoids dietetic indiscretions, his bowels move but once or twice daily, and the stools are solid or semisolid.

Case 5.—L. J., a man, aged 30, admitted to the hospital, Jan. 27, 1919, with far advanced pulmonary tuberculosis, stated that for two months prior to admission the gastro-intestinal symptoms had been so pronounced as to be considered by the patient of utmost importance. Constipation, continuing for several days, would alternate with diarrhea, which, checked by medicinal and dietetic treatment, would again be followed by constipation and abdominal pain. Feb. 23, 1919, during an attack of diarrhea that resisted medication, he was injected intravenously with 5 c.c. of a 5 per cent. solution of calcium chlorid. Relief was at once noted, and the gastro-intestinal symptoms were ameliorated within twenty-four hours. The pains disappeared, and the number of stools was reduced to two in twenty-four hours and they became of semisolid consistency. The relief proved short-lived. Three days later the old symptoms reappeared with the former intensity. March 9, a second injection of calcium chlorid was given, and this also was followed by relief in the gastro-intestinal symptoms for two days. March 13, a third injection was administered. The relief obtained was more enduring, the number of stools a day for a month diminishing to two or three. The abdominal pain, however, persisted.

In some cases the treatment failed utterly; repeated injections of calcium chlorid failed to give relief. The following cases are cited as examples:

Case 6.—J. G., a man, aged 21, admitted to the hospital, Nov. 2, 1918, showed symptoms and signs of advanced pulmonary tuberculosis with excavations. He stated that for about one year prior to admission he had been passing from eight to ten stools a day. All efforts on the part of his physician to check the diarrhea failed to afford relief. Feb. 26, 1919, an intravenous injection of calcium chlorid was administered. A slight amelioration in the pain and diarrhea was noted for two days, but then the symptoms returned with the former severity. A second and a third injection also failed to give relief.

Case 7.—A woman, aged 17, admitted to the hospital, Feb. 28, 1919, had advanced pulmonary tuberculosis. For about four months she had been suffering from severe gastro-intestinal symptoms, nausea, vomiting, abdominal pains and constipation alternating with diarrhea. During the first few days of her sojourn at the hospital from six to eight movements of the bowels occurred daily. March 5, 2.5 c.c. of a 5 per cent. solution of calcium chlorid were administered intravenously. No effect on the gastro-intestinal symptoms was noted. Another injection, this time of 4 c.c. of the solution, was given without influencing the diarrhea or the abdominal pains, and a third injection was similarly futile.

COMMENT

On carefully analyzing the cases in which this mode of treatment has been tried, it appears that the calcium chlorid is effective only in cases of early intestinal tuberculosis. When the diarrhea has continued only a few weeks it may be checked much better than with any medication or dietetic changes hitherto practiced. In such cases even the abdominal pains may be removed by calcium chlorid. In cases in which the diarrhea and pains have been present for several weeks, repeated injections of calcium chlorid may reduce slightly the frequency of the stools, but no amelioration is noted in the abdominal pain. It also appears that in cases in which there are symptoms and signs of amyloidosis, enlarged liver, polyuria, etc., the intestinal symptoms are not relieved by the treatment. It may be safe to make the following generalization: When the diarrhea in a tuberculous patient is due to dietetic indiscretions, to the catarrhal condition of the intestinal mucous membrane, or to slight intestinal ulceration, an intravenous injection of 5 c.c. of a 5 per cent. solution of calcium chlorid will give prompt relief. When, however, the intestinal symptoms are due to extensive ulcerations—especially to amyloid infiltration of the intestine—the chances of attaining relief of the pain and annoying diarrhea are remote. Similarly, when the abdominal pains are due to irritation of the intestinal mucous membrane by the contents of the intestine, relief may be attained by intravenous injection of calcium chlorid. When, however, the pains are due to localized peritonitis over deep intestinal ulcers, or to peritoneal adhesions, which are not uncommon in tuberculous subjects, calcium chlorid is impotent to give relief.

The mode of action of calcium chlorid in these cases can only be surmised at the present state of our knowledge of its physiologic action and pharmacology. We cannot explain it on the theory of lime starvation, which is said to be a strong etiologic factor in tuberculosis, because the administration of calcium chlorid has no influence on the other symptoms of phthisis. On the other hand, Loeb found that calcium salts stop contact irritability of muscle and the hypersensitiveness of the nervous system induced by various salts. It has also been found that calcium salts impede and even stop completely intestinal peristalsis; at times they even counteract the action of certain laxative drugs.

170 West Fifty-Ninth Street.

ANTIPNEUMOCOCCUS SERUM (KYES) IN THE TREATMENT OF LOBAR PNEUMONIA

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The relative good fortune of Camp Grant in respect to epidemics from which many of the southern camps were severe sufferers during the winter of 1917-1918 made possible a more detailed clinical study of the cases of lobar pneumonia admitted to the base hospital during this period than could have been attempted under other conditions. The present paper was originally written with this idea in mind. When sent to France for final revision, the manuscript was lost and publication has been delayed. In view of the numerous reports from other camps dealing with the same subject, published during the past year, much of the original material of this article has become of little interest. The paper has therefore been abridged by the elimination of all discussion of bronchopneumonia and empyemas of streptococcic origin, and has been rewritten from the point of view of serum therapy. The figures have also been changed to include all cases in which the same method of treatment was employed, from May 1 to September 21, during which period Capt. Edwin F. Hirsch was in charge of the pneumonia wards.

The report includes only such cases as were beyond a reasonable doubt frank pneumococcus lobar pneumonia. There were 322 such cases which came under observation at the base hospital at Camp Grant, Rockford, Ill., from Oct. 1, 1917, to Sept. 21, 1918. No case was reported as lobar pneumonia nor is here included, which did not show definite lobar consolidation as evidenced by tubular breathing, increased tactile fremitus, bronchophony and flatness. This criterion of diagnosis was followed to eliminate those instances of respiratory infection of short duration and often due to pneumococcus, which simulate lobar pneumonia in that there is a sudden onset with high fever and severe prostration but in which, within twenty-four or forty-eight hours, recovery is rapid and in which at no time distinct consolidation occurs.

An early diagnosis, although frequently difficult, was made on the first or second day following the onset in approximately two thirds of the cases. Hyperresonance with distant breath sounds and slight voice changes occurred not infrequently on the first day. The changes in tactile fremitus and bronchophony were, on the whole, the most reliable and constant physical signs in the establishment of early lobar involvement.

BACTERIOLOGIC EXAMINATION OF THE SPUTUM

In all cases the bacteriologic examination of the sputum included the grouping of the pneumococci found therein according to the four so-called types. When the organisms could be identified as belonging to one of the first three types, the determination was of value in confirming the physical signs indicating pneumococcus lobar pneumonia. Unfortunately, however, two thirds of the organisms classified by means of mouse inoculation and the Avery method fell into Group IV, which in itself is a heterogeneous composite of such strains as do not fall into the first three groups and which offers no sharp distinction between certain pneumococci and certain streptococci. In a great majority of the cases, therefore, the sputum examination added no explicit early evidence as to whether the lung involvement was essentially a pneumococcus lobar pneumonia or a streptococcus bronchopneumonia, and was of corresponding slight clinical aid. The typing was continued systematically throughout the series, however, and Table 1 gives the occurrence of the organisms in terms of the four so-called types.

TABLE 1.—RELATIVE INCIDENCE OF TYPES OF PNEUMONIA

	Group				
	I	II	III	IV	Total
Number of Cases	43	56	13	190	311*
Percentage of cases	11.8	18.7	4.1	65.2	

* This total does not include eleven additional cases not typed.

LEUKOCYTE COUNTS

The daily leukocyte counts were made in all cases during the acute course of the disease, and were of some prognostic value. In general, the leukocytosis ranged between 15,000 and 30,000, but in twenty cases the initial counts were below 10,000. Of these cases, seven terminated fatally early in the attack, two others developed empyema and one a purulent pericarditis. The highest leukocytosis observed was in a case with a late crisis on the thirteenth day. In this case, the leukocytosis advanced from 30,000 to 67,000 during the ninth day. Modification of the leukocytosis by the immune serum treatment will be referred to later.

Approximately two thirds of the cases gave a history of sudden onset with a chill, and in five of these epistaxis occurred and in four vomiting. The history of a "cold" existing for from one to two weeks prior to hospital admission was given in approximately one third of all cases.

Almost without exception the cases at admission displayed a high fever, from 104 to 106 F., and an almost constant symptom was pleurisy, associated with severe respiratory distress. In twenty-one cases there was referred abdominal pain characteristic of diaphragmatic involvement, and in six cases the pain was referred also to the neck.

Herpes on the lips and face occurred in one third of the cases, and jaundice was distinct in fourteen cases, five of which terminated fatally. Cerebral symptoms were present in 12 per cent. of all cases, varying from the characteristic delirium to definite meningismus, the latter leading in three cases to a bacterial diagnosis by lumbar puncture.

USE OF THE KYES SERUM

In the treatment of all cases, systematic use was made of a polyvalent antipneumococcus serum prepared at the University of Chicago by Dr. Preston Kyes and described by him elsewhere.[1] In view of the results obtained by the previous use of this serum in 115 cases of pneumonia in a civil hospital, Major Joseph A. Capps, chief of the medical service, introduced the use of the serum as a routine procedure at Camp Grant, Oct. 1, 1917, and the results obtained were such as to indicate its continued use. It must be borne in mind, of course, that clinical evidence as to the efficiency of any therapeutic reagent is at best indefinite and must be accumulated in great amount and under varied conditions before final conclusions may be drawn. However, in this fairly large series of cases, the serum appeared to modify the course of the disease in several particulars with such constancy that it is the conclusion of those observing its use that the low death rate resulting should be interpreted as being in a considerable measure due to the therapeutic efficiency of the serum. In its action, the serum appears distinctly to reduce the toxemia, to reduce the general level of the temperature and especially that of the pulse. In most instances the leukocytosis is successively increased by injection of the serum; but this is not without exception. The impression is gained that in the large number of cases displaying a crisis on or before the fourth day, the sudden change bears a direct time relation to the injection of the serum.

The serum was employed for the most part intravenously, the usual dose being 2.5 c.c. once or twice daily. The total number of doses given varied from one to twelve with individual patients, in the average case from three to five injections being given.

A disadvantage attending the serum as first obtained was that on intravenous injection it provoked a marked temperature reaction accompanied by a chill of greater or less severity. The first twenty-five cases of this series were treated by serum which regularly produced this result, and the question naturally arose as to how great a part the foreign protein reaction might play in the apparent therapeutic effect of the serum.[2] To avoid this reaction, intramuscular injections of relatively large doses were resorted to for a time as a substitute for the intravenous injection. Later, however, the serum was furnished in a form which allowed its intravenous use without this disadvantage, and this avenue of introduction was then established as a routine.

Of the 322 cases under consideration, twenty-five terminated fatally, the death rate being 7.7 per cent. In two of the fatal cases, extensive preexisting chronic pulmonary tuberculosis was detected at necropsy, in one case general syphilitic arteriosclerosis and myocarditis were revealed, and in one case tonsillectomy had been performed two days before the onset of the pneumonia and three days prior to death.

Table 2 gives the death rate obtained in the cases grouped according to the type of pneumococcus as determined by the sputum.

TABLE 2.—MORTALITY RATE IN THE SO-CALLED GROUPS

	Group				Not Typed	Total Series
	I	II	III	IV		
Cases	43	56	13	199	11	322
Deaths	4	8	0	13	0	25
Mortality, per cent.	9.3	14.2	0	6.5	0	7.7

CONCLUSION

The low mortality in this extensive series of cases, together with the favorable modification of clinical symptoms by the serum, as stated above, would seem to indicate the extension of its use in pneumococcus lobar pneumonia.

122 South Michigan Avenue.

BACTERIAL CARRIERS IN THE UPPER RESPIRATORY TRACT

REPORT OF A SURVEY *

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Major, M. C., U. S. Army
AND
ROY E. TAYLOR
Second Lieutenant, Sanitary Corps, U. S. Army
TAKOMA PARK, D. C.

The cases of pneumonia that occurred at the Walter Reed General Hospital between Oct. 1, 1918, and May 1, 1919, were classified bacteriologically from cultures of sputum, blood or organs at necropsy. The number of cases that developed each week are shown in the accompanying chart. Pneumococci were the organisms most frequently found in these pneumonias, and Types II and IV were much more prevalent than Types I and III. *Streptococcus hemolyticus* was relatively unimportant until January, 1919, when the cases showing this organism suddenly increased in number. It was feared that a large number of streptococcus infections might occur, as was the case last year following the measles epidemic, and at the suggestion of Col. F. F. Russell, M. C., U. S. Army, a survey of the post was made to determine the number of normal persons carrying hemolytic streptococci in their upper respiratory passages.

In the survey that was made between Jan. 26, 1919, and May 1, 1919, 3,174 persons were examined. This included the entire hospital personnel, all patients in the infectious disease wards and all patients admitted to the receiving ward. While we were primarily interested only in the prevalence of *Streptococcus hemolyticus,* it was decided to make pharyngeal cultures from the same persons for the pneumococcus and meningococcus. In the last 1,299 cases (March 13 to May 1, 1919) cultures were taken also for Klebs-Loeffler bacilli.

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[1] Kyes, Preston: The Production of Antibodies to Pneumococci in an Insusceptible Host, J. A. M. A. 56: 1878-1881 (June 24) 1911; J. M. Res. 38: 495-501 (July) 1918.

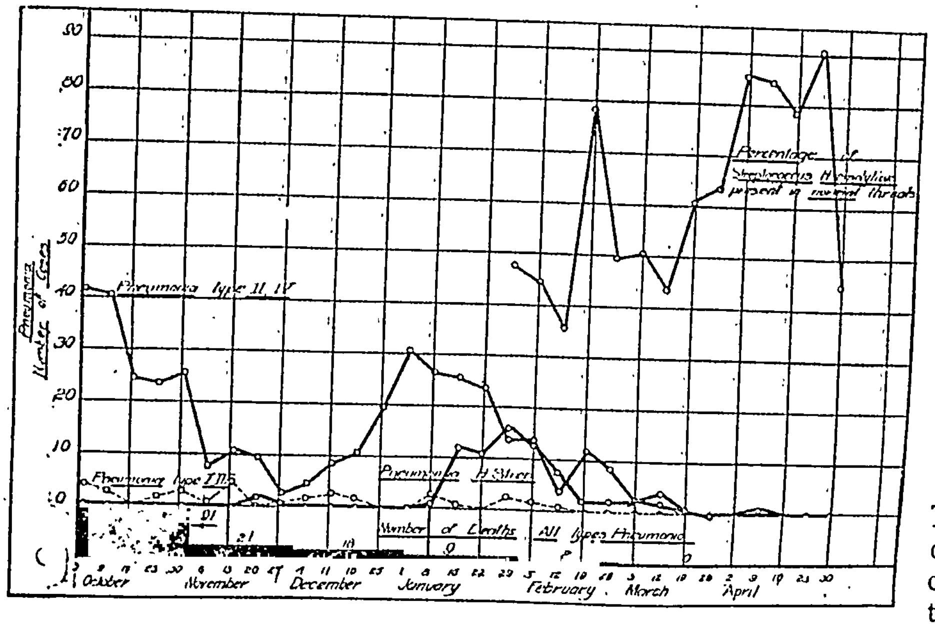
[2] Roberts, Dudley, and Cary, E. G.: Bacterial Protein Injections in Influenzal Pneumonia, J. A. M. A. 72: 922 (March 29), 1919. Lamb, F. H., and Brannin, E. B.: The Epidemic Respiratory Infection at Camp Cody, N. M., J. A. M. A. 72: 1056 (April 12) 1919.

*From the Laboratory of the Walter Reed General Hospital.

TECHNIC FOR TAKING CULTURES

Cultures were taken in each case by means of a long bent wire swab which was first introduced into the nasopharynx to obtain material for the meningococcus plates (glucose serum agar). After these plates were inoculated, the same swab was used to obtain material from each tonsil and this material was transferred to blood agar plates to be cultivated for hemolytic streptococci and pneumococci. This swab was also used for making diphtheria cultures on coagulated serum mediums in some of the cases. By this method we were able to obtain a fairly representative culture of the upper respiratory tract.

The hemolytic streptococci were identified by the morphologic appearance of the colonies and the type of hemolysis produced on plain blood agar plates. Readings were made after twenty-four hours' incubation at 37.5 C., and the number of colonies were recorded as +, ++, +++ and ++++, depending on whether the streptococci represented one-fourth, one-half, three-fourths or the total number of colonies present. The same method was used in recording the number of pneumococci present. No attempt was made to determine the types of these organisms, and the accuracy of the pneumococcus results are therefore questionable. Only nasopharyngeal material was used in making plates for meningococci, as pure cultures are more readily obtained by this method. The latter cultures were incubated in a moist chamber devised and used last fall by Lieut. F. L. Gates, M. C., and Major J. H. Austin, M. C., at Camp Zachary Taylor.



Course of pneumonia at Walter Reed General Hospital.

After eighteen hours' incubation, typical colonies showing gram-negative diplococci were transplanted to be identified and typed by agglutination reactions later. Klebs-Loeffler bacilli were identified and typed by the morphologic appearance of the organisms after twenty-four hours' incubation on coagulated serum mediums.

RESULTS

Streptococcus Hemolyticus.—The total number of throat cultures made for hemolytic streptococci was 3,174, of which 1,774 (56 per cent.) were positive. Seven hundred and ten (22.4 per cent.) of the positive cultures were +, 462 (14.5 per cent.) were + +, 327 (10.3 per cent.) were + + + and 275 (8.7 per cent.) showed pure cultures and were called + + + +. The highest total percentage of carriers was found in the examination of patients admitted to the receiving ward, and the lowest in the hospital personnel on duty. The highest + and + + percentages were obtained from the receiving ward group, the lowest from the infectious disease group; the highest percentage of + + + + readings was from the infectious disease group, and the lowest from the hospital personnel.

TABLE 1.—STREPTOCOCCUS HEMOLYTICUS RESULTS

Group	Total	Total Positive		+		++		+++		++++	
		No.	%	No.	%	No.	%	No.	%	No.	%
Hospital personnel....	1,517	712	47	271	18	183	12	144	9.5	114	7.5
Patients, infectious disease group........	106	54	51	8	7.5	9	8.5	16	15	21	20
Patients, receiving ward group........	1,551	1,008	65	431	27.8	270	17.4	167	10.8	140	9
Total number of cultures...	3,174	1,774	56	710	22.4	462	14.5	327	10.3	275	8.7
Persons in whom cultures were taken after tonsillectomy	66	15	23	6	9	9	13.8	0	0	0	0

The weekly variations in percentages of positives is shown in the accompanying chart. The highest point on the carrier curve occurred, April 23, while only one case of streptococcus pneumonia occurred during the month of April. At this time cultures were made of sixty-six individuals on whom tonsillectomy had previously been performed. Six of these (9 per cent.) were +, nine (13.8 per cent.) were ++, and none were either +++ or ++++.

Pneumococcus.—Twenty-five per cent. of the 3,174 throat cultures were positive for pneumococci. The infectious disease group gave the highest percentage of positives (45 per cent.) while the receiving ward admissions were lowest (20.5 per cent.).

Meningococcus.—Ninety-four (2.99 per cent.) meningococcus carriers were found in the examination of the 3,174 nasopharyngeal cultures. Sixty-one (2 per cent.) of these were normal, thirty (0.94 per cent.) were para and four (0.13 per cent.) were intermediate types. Cultures were taken of forty-one of these positive carriers, none of whom had received any treatment, after eight weeks had elapsed. At this time only three "normals" and one "para" were still positive.

TABLE 2.—PNEUMOCOCCUS RESULTS

Group	Total	Total Positive		+		++		+++		++++	
		No.	%	No.	%	No.	%	No.	%	No.	%
Hospital personnel....	1,517	433	28.5	132	8.7	176	11.6	96	6.33	29	1.7
Patients, infectious disease group........	106	51	48	11	10.4	14	13.2	13	12	13	12
Patients, receiving ward group........	1,551	319	20.5	144	8.7	91	5.9	51	3.3	33	2.1
Total......	3,174	803	25	287	9	281	8.9	160	5	75	2.3

It is of interest to note that at this hospital, where no case of meningococcus meningitis has occurred since Oct. 28, 1918, the total percentage of nasopharyngeal carriers was only 2.99 per cent., while in a large number of nasopharyngeal cultures made from contacts of cases at Camp Zachary Taylor last winter, the positive reached 6.5 per cent.

Klebs-Loeffler Bacilli.—Eighteen (1.4 per cent.) positive cultures were obtained from 1,299 persons examined between March 13 and May 1, 1919. This is approximately the average percentage reported as normal by Goldberger, Williams and Hachtel.

SUMMARY

1. Over half (56 per cent.) of 3,174 persons examined at the Walter Reed General Hospital between Jan. 22 and May 1, 1919, were carriers of *Streptococcus hemolyticus.*
2. After tonsillectomy in sixty-six cases, only 23 per cent. of cultures showed hemolyticus streptococci, and in all of these the number of colonies was small.
3. A comparison of the weekly percentage of carriers with the weekly occurrence of infection failed to show that any direct relation existed between the two. Jan. 29, 1919, the streptococcus pneumonia curve reached its highest point, while the carrier percentage was at its lowest; and as the latter continued to rise, the former fell to the zero line.
4. For other organisms, the total positive percentages were: pneumococci, 25 per cent.; meningococci, 2.99 per cent., and Klebs-Loeffler bacilli, 1.4 per cent.

THE VALUE OF CHEST FLUOROSCOPY

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In their article on "The Value of Chest Fluoroscopy," Diemer and MacRae[1] state that their material is based on the roentgen-ray findings in 425 patients rejected on account of pulmonary tuberculosis by the tuberculosis examining board at Camp Lewis, American Lake, Washington.

Considering the fact that I was president of the board and that the tuberculosis examinations of the second-draft men sent to Camp Lewis were carried out under my supervision; furthermore, since a considerable amount of the fluoroscopic work was done by me and I do not find myself in entire agreement with the above-mentioned authors as to the value of chest fluoroscopy, I feel that in order to be fair to both physical diagnostic and to roentgen-ray procedures, the results of a comprehensive study of the examination of the second-draft material comprising 72,985 men should be presented. (The findings on 35,984 first-draft men examined by Major Ray W. Matson are also available, totaling in all 108,967 men examined. The entire report will be published later.)

Moreover, the authors present some figures that represent an analysis of the data from the standpoint of fluoroscopic findings in the rejected cases only, with entire disregard of the findings in the accepted cases, and they have not noted for comparison even physical findings in the rejected cases, consequently the figures presented are misleading and do not represent the rôle played by the roentgen ray, either in the examination of men rejected on account of tuberculosis, or in those who were accepted for military service at Camp Lewis.

NECESSITY OF COMPARING RESULTS

In dealing with a complicated subject matter such as "Value of Chest Fluoroscopy," trustworthy conclusions can be reached only after we have been compelled to look at the facts from opposite points of view, analyzing all the material at our disposition for study rather than a selected portion of it (rejects); and it is very doubtful also whether controversy is an effective means of determining the merits of opposing opinion regarding the value of a method or procedure, because most readers are left in a state of confusion as to where the truth lies and perplexity is certain to be the result of the discussion, unless full materials for controlling opinions are given. The logical weight of the different factors that influence opinions regarding the value of the fluoroscope in chest examinations with special reference to the tuberculosis examinations at Camp Lewis can be arrived at and given their proper value by the reader only when he has been made familiar with the organization and plan of examination followed by the tuberculosis board of Camp Lewis, and also when the fluoroscopic findings, not only of "rejects," but also of "accepts," are placed before him.

THE ORGANIZATION AND PLAN OF EXAMINATION

The organization and plan of examination employed at Camp Lewis has already been described by the writer.[2] The plan was the outcome of observations by Major Ray W. Matson in the examination of the command for tuberculosis at Vancouver Barracks, Washington, August, 1917. During the course of these examinations it became apparent that, in the absence of specially trained tuberculosis examiners, some plan would have to be worked out which would bring masked forms of tuberculosis and those with minimum physical findings to the attention of the president of the board. Accordingly an informal history form was devised and adopted for the work at Camp Lewis (Form 1, Camp Lewis Board).

The Camp Lewis tuberculosis examining board for the second draft was organized to examine 1,500 men daily and comprised twenty preliminary examiners (ten inexperienced) and two refer examiners (the president of the board and his assistant). The roentgen-ray work was done by Captain Diemer and Lieutenant MacRae with considerable assistance by the president of the tuberculosis board. Mention of my assistance is made because, in spite of many years of roentgenologic experience in the examination of the chest, I contributed to the hits and misses as shown by Table 1, and I have every desire to receive my share of the criticism directed against fluoroscopy and the part it alone played in the tuberculosis rejections at Camp Lewis.

SELECTION OF PRELIMINARY EXAMINERS

The preliminary examiners were selected from the infirmaries in the camp, few of them having had any recent training and none of them any special training in physical diagnosis. This should be borne in mind, because it has a very important bearing on the comparative value between the findings of the fluoroscopists and the clinical examiners as noted in Diemer and MacRae's article.

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[1] Diemer, F. E., and MacRae, R. D.: The Value of Chest Fluoroscopy, J. A. M. A. **72**: 172 (Jan. 18) 1919.

[2] Matson, R. C.: Examination of Recruits for Tuberculosis, New York M. J. **108**: 199 (Aug. 3); 245 (Aug. 10) 1918.

In selecting preliminary examiners an effort was made to get officers who were especially interested in the subject, the idea being to give a considerable number of medical officers service on the board so that organizations going overseas would have at least one medical officer with some special knowledge of the diagnosis of tuberculosis. Therefore, fully half the personnel of the board was constantly changing on account of temporary assignments for duty during the incoming draft increments. The other half constituted a permanent board and was made up of officers who, during their temporary assignment, exhibited special talent. Each permanent member took a temporarily assigned officer under his supervision. The vast majority of the cases of pulmonary tuberculosis not recognized by the preliminary examiners but diagnosed by the refer examiners (many of these cases were diagnosed positively tuberculosis by the fluoroscopists before the case got to the refer examiners) were missed by the officers temporarily assigned.

TABLE 1.—FLUOROSCOPIST AND FLUOROSCOPIC DIAGNOSIS OF 570 REJECTED CASES DIAGNOSED PULMONARY TUBERCULOSIS BY THE REFER EXAMINERS ON THE TUBERCULOSIS BOARD

Fluoroscopist	Number Examined	Diagnosis					
		Number Positive Tuberculosis	Percentage Positive	Tuberculosis Suspicious	Abnormality	Number Negative	Per Cent. Negative (Missed)
Diemer	198	93	48	65	28	12	6
MacRae	211	117	54	37	50	7	3.3
Matson	140	*100*	71	22	12	6	4.2
Others	21	5	24	4	10	2	9.5
Totals	570	315	*55	128	100	27	*4.7

* Average.

INSTRUCTIONS TO PRELIMINARY EXAMINERS

The preliminary examiners were instructed to interrogate each man verbally regarding family history, past and present history along the lines indicated in Circular B of this board, and according to the informal history form (Form 1 of this board). The physical examination was then made as suggested in Circular A of this board and Circular 20 S. G. O., following the principles so masterfully outlined by Col. George E. Bushnell, whose work cannot be praised too highly. If the preliminary examiner had reasons to suspect tuberculosis, either from the man's family history, past history, present history or the results of the physical examination, he was required to initiate the blank history Form 1, send the man in for fluoroscopic examination and to the refer examiner for opinion and disposition. In any event, this procedure was carried out in cases presenting any of the following circumstances:

A. History of prolonged contact with, or death in the family from, tuberculosis.

B. Inability to work because of ill health.

C. Well-defined history of previous pleurisy, pneumonia, frequent or protracted colds, typhoid fever or any other past illness of prolonged character, such as prolonged cough accompanied by expectoration, hemorrhage from the lungs or expectoration of bloody sputum, loss of weight or strength, night sweats, fatigue, etc. (A sputum examination was carried out in every case in which cough or expectoration was asserted, or râles of any description were heard on auscultation, except marginal râles.)

D. Existing cervical adenitis, tuberculosis of the bones or joints, or rectal fistula.

E. Asthenia and all cases in which the physical condition is manifestly below par; or lack evidence of stamina or resistance to disease.

F. Cases of chest deformity; scoliosis, kyphosis, funnel chest, pigeon breast, flat chest and barrel chest.

G. Cases in which physical examination reveals:
  1. Impaired resonance on percussion.
  2. Increased transmission of voice sounds over areas in which these are not normally increased.
  3. Abnormal breathing, such as sharpened vesicular or rough inspiration, with prolonged expiration, over areas in which this is physiologically abnormal —even though no râles are detected.
  4. All cases presenting râles, except marginal râles.
  5. Fixation of lung borders or Turban shading.

If the examination as just indicated was distinctly negative and the preliminary examiner was of the opinion that there was no evidence of disease of the lungs, pleura or mediastinum, he accepted the man and indicated this action by placing his number in an assigned space on Form 88 M.D. This enabled us to determine the examiner who was responsible in any case brought to our attention later.

On the other hand, if the man fell into any of the above groups (A, B, C, D, E, F, or G) the History Form 1 was initiated by the preliminary examiner and he filled in the important data bearing on the case. He also wrote in the result of the physical examination. In case of abnormal physical findings the preliminary examiner was obliged to record the results of inspection, percussion and auscultation. A diagnosis was required if a lung abnormality was noted. If tuberculosis was diagnosed the examiner was obliged to indicate the character, location, extent and activity of the lesion. In case of other lung disease, sufficient evidence was given to justify the diagnosis. The preliminary examiner then checked for sputum examination, provided the man stated that he suffered from cough and expectoration, or if any kind of râles, other than marginal, were detected on auscultation. He wrote his recommendation to the president of the board and his reason for referring the case to the roentgenologists and refer examiners; such as, "family history," "past history," "physical findings," "chest deformity," "asthenia," etc. The preliminary examiner signed the blank and placed his number on Form 88, together with an "H" to indicate that a history had been written. The papers were then returned to the conscript, who passed on to the clerk. They completed the history and sent the man in for fluoroscopic examination, which was carried out at once, the findings being typed on the history form, which was then sent to the refer examiner who reviewed all the evidence; namely, the completed history, physical examination by the preliminary examiner and his diagnosis, and the roentgen-ray findings. The refer examiner then either accepted the man on accumulated evidence without examination or the man was brought in for careful reexamination by the refer examiner.

WORK OF REFER EXAMINERS

If 1,500 men were examined by the board in a day it is probable that from three to four hundred fell into some one of the above groups. All records of these men were gone over by the refer examiners but all men were not reexamined, as reexamination of all refer cases was unnecessary. For instance, suppose in a given case the preliminary examiner found the lungs negative, but that there was a family history and contact history of tuberculosis, for which reason the man was referred; the refer examiner would accept the man without reexamination if the record showed the man working steadily, maintaining top weight, without cough or expectoration, in good general condition, good strength and roentgen ray negative or revealing only an abnormality. However, if the roentgenologic test diagnosed positive or suspicious tuberculosis or the man stated he was unable to work on account of sickness or loss in weight amounting to 10 per cent. in the two years previous to entering service, although this might be attributed to hard work, the man was reexamined. A reexamination was done in nearly every case irrespective of roentgen-ray findings, whenever the preliminary examiner noted a lung abnormality, whether diagnosed tuberculosis or not. In fact, reexamination by the refer examiner was carried out in all cases when there was any evidence suggesting tuberculosis either in the past or present history, physical findings by the preliminary examiner or by fluoroscopic examination.

INDICATIONS FOR REJECTIONS

Rejections were made by the refer examiners only and always after reexamining the man. Rejections were based on physical findings supported or unsupported by roentgenology. No man was rejected on roentgenologic findings alone.

This somewhat lengthy introduction was necessary, for one cannot hope to reach a decision in a controversy of this character and avoid lapsing into fallacy unless conversant with the above-mentioned facts.

DISTINCTION BETWEEN PRELIMINARY AND REFER EXAMINERS

From what has been said, it will be seen very clearly that the tabulation of results in Captain Diemer and Lieutenant MacRae's article is a comparison between the findings of the fluoroscopist and those of the *preliminary examiner,* as the rejections were based on the findings of the refer examiner who was the arbiter. The distinction between preliminary and refer examiners and their respective duties is not brought out in their article. The term "special examiners" used in the article should read, "refer examiners," and "clinical examiner" should read, "preliminary examiner." After recalling that the preliminary examiners, aside from the ten qualified, comprised officers for the most part inexperienced in chest examination, whereas the fluoroscopists had had extensive experience, it must be admitted that this comparison is not a rational one.

Of forty-one rejected cases that had been fluoroscoped by other fluoroscopists than Diemer, MacRae and the writer (Table 1) only 24 per cent. were diagnosed positive by them and over 9 per cent. pronounced negative, whereas the average positives were 55 per cent. and the average misses were 4.7 per cent. It will thus be seen that, although they were experienced fluoroscopists, their diagnoses were inaccurate, being vastly inferior to those of the inexperienced preliminary examiners, as will be noted later.

With these preliminary remarks in mind, Tables 2 and 3 become intelligible and reveal, I think, the facts of the situation. Table 2 shows an analysis of the examination of 72,983 second-draft men. We note that histories were recorded and roentgenologic examinations made in 16,589, or 22.7 per cent., for the reasons set forth, they thus falling into some one of the above-mentioned groups. Of this number, roentgenology reports 343 positive cases of tuberculosis (clinical verification unnecessary according to the authors), 1,500 suspicious, 2,349 with an abnormality (abnormalities in the illumination, such as haziness, general or localized, combined with lagging diaphragm, adhesions or obliteration of the pneumocardiac angle, marked calcification areas, etc.) and 12,393 negative. Of the 16,589 whose histories were recorded and who were examined roentgenologically the refer examiners accepted 12,096 on accumulated evidence (history, preliminary examiner's findings and roentgenologic findings). Most of those accepted without reexamination were in groups in which the lungs were found negative by the preliminary examiners and fluoroscopists. Only one of those so accepted without reexamination showed tuberculosis later. This case was one referred on account of a past history of pneumonia. The examiner pronounced the lungs negative, the roentgenologic examination was negative, and as the man had been working steadily with no loss of weight, being in good general condition and nothing otherwise suggesting tuberculosis, the refer examiner accepted him without reexamination. Three months later he was referred back by an infirmary surgeon. Examination revealed chronic active fibrocaseous tuberculosis. The sputum contained tubercle bacilli.

Of the 16,589 men whose histories were recorded 4,563 were reexamined and 570 were rejected on account of active tuberculosis, though according to the roentgenologic examination 1,843 were tuberculous and suspicious.

Diemer and MacRae state that they were unable to claim recognition of all the cases rejected (425—now 570) but that a considerable percentage was missed by the clinical examiners. Clinical examiners should read "preliminary examiners," as the diagnosis of tuberculosis was made by the refer examiner in every case and required no roentgenologic verification.

DISCUSSION OF REJECTED CASES

Let us examine the table of rejected cases (Table 3). Of the 570 rejects on the clinical diagnosis made by the refer examiner we note the roentgenologic examination detected 315, or 55 per cent. positive tuberculosis, while the preliminary examiners diagnosed tuberculosis in 299, or 52 per cent. (this represents the number under G, Table 3, sent to the roentgenologic laboratory, diagnosed active and inactive tuberculosis by the preliminary examiner and confirmed by the refer examiner)—a very slight difference indeed. Table 1 shows that the inexperienced fluoroscopist recognized as tuberculosis only 24 per cent. of the rejects. Let us compare Table 2 with Table 3. It will be seen in Table 2 that 343 were reported by the fluoroscopist as unqualifiedly tuberculous. The clinical verification, which it is stated was not necessary, was indeed necessary, not only to confirm the diagnosis of tuberculosis but to determine its activity, for only 315 were rejected

(Table 3) and twenty-eight were accepted for service with healed lesions. Of the 1,500 reported by the fluoroscopists as tuberculosis suspicious, Table 2, 1,372 were accepted by the refer examiners for full military service and are still intact, while 128 were rejected with unmistakable physical findings of chronic active fibrocaseous tuberculosis (Table 3). Of the 2,349 reported by the fluoroscopists with an abnormality (Table 2), 2,249 were accepted by the refer examiners for full military service and 100 were rejected by the refer examiners for chronic, active, fibrocaseous tuberculosis (Table 3); and of 12,393 reported negative by the fluoroscopists (Table 2) twenty-seven were found with physical findings sufficient to justify a diagnosis of chronic, active, fibrocaseous tuberculosis and they were rejected (Table 3). It is true that this is a small percentage of misses considering the number examined roentgenologically; nevertheless, 4,563 of the 16,589 so examined had to be carefully reexamined by the refer examiners in order to establish a diagnosis.

TABLE 2.—ANALYSIS OF CASES REFERRED TO REFER EXAMINERS—COMPRISING 72,983 SECOND-DRAFT MEN

Reason Preliminary Tuberculosis Examiner Referred Case to Refer Examiner	Number	Per Cent.	Roentgenologist's Report				Accepted by Refer Examiner on Accumulated Evidence Without Reexamination			Results of Examination by Refer Examiner and Disposition									Total Accepted	Per Cent. Rejected
			Tuberculosis	Suspicious	Abnormality	Negative	Number	Still Intact	Developed Tuberculosis Later	Acute and Subacute Respiratory Process	Chronic Respiratory Process	Healed Tuberculosis Accepted	Thickened Pleura	Negative	Active Tuberculosis Rejected	Accepted	Reexamined	Developed Tuberculosis Later		
Preliminary Examiner Found Lung Negative																				
A. History of prolonged contact with, or death in the family from, tuberculosis	3,241	4.44	30	294	351	2,566	2,635	2,635	0	107	3	20	51	383	42	564	606	0	3,199	
B. Inability to work because of ill health	3	0.00004	0	0	1	2	2	2	0	0	0	0	0	0	1	0	1	0	2	
C. 1. Well-defined history of previous pleurisy, pneumonia, frequent or protracted colds, typhoid fever or any other past illness of prolonged character which might have been tuberculosis, such as prolonged cough or expectoration, hemorrhage from lungs, or expectoration of bloody sputum	4,434	6.1	44	307	608	3,475	3,650	3,649	1	113	7	29	122	456	57	727	784	0	4,377	
2. Present history of cough, expectoration, loss of weight or strength, night sweats, fatigue	1 278	1.75	29	124	184	941	967	967	0	41	1	12	40	174	43	268	311	0	1,235	
D. Existing cervical adenitis, tuberculosis of the bones or joints, or rectal fistula	84	0.00011	1	6	16	61	63	63	0	1	0	2	2	13	3	18	21	0	81	
E. Asthenia and cases in which the man's physical condition is manifestly below par; or evidence of lack of stamina or resistance to disease	1,015	1.4	17	106	118	774	774	774	0	12	3	16	41	147	32	199	231	0	983	
F. Cases of chest deformity: scoliosis, kyphosis, funnel chest, pigeon breast, flat chest and barrel chest	1,308	1.8	7	131	171	999	1,024	1.024	0	14	1	10	46	196	17	267	284	0	1,291	
Subtotals	11,363	.....	128	968	1,449	8,816	9,125	9.125	1	288	15	89	302	1,369	195	2,034	2,238	0	11,168	
Preliminary Examiner Found Lung Abnormality																				
G. Cases referred to roentgenologist because of lung abnormality not diagnosed tuberculosis by the examiner; such as bronchitis, bronchopneumonia, emphysema, asthma, etc.	2,859	3.9	42	228	491	2,098	2,051	2,051	0	184	31	21	168	327	76	731	808	0	2,782	
Cases referred to roentgenologist diagnosed tuberculosis by the examiner:																				
Active	819	1.1	123	120	140	436	121	121	0	60	6	49	58	305	216	478	608	0	599	
Inactive or healed	1,548	2.1	50	184	269	1,043	799	799	0	260	2	55	37	361	83	665	749	1	1,464	
Subtotals	5,226	.....	215	532	900	3,577	2,971	2,970	0	504	39	125	263	993	375	1,874	2,255	1	4,845	
Grand totals	16,589	22.7	343	1,500	2,349	12,393	12,096	12,095	1	792	54	214	565	2,362	570	3,987	4,563	1	16,013	0.78

We furthermore note (Table 3) 216 cases of active, pulmonary tuberculosis rejected, in which the refer examiners confirmed the diagnosis of the preliminary examiner, yet only 116 of them, or 54 per cent., were recognized as positive tuberculosis by means of the roentgenologic examination, just 2 per cent. better than the preliminary examiners did in all cases. These were all cases in which the preliminary examiners were able to make the diagnosis on physical findings alone. In the same column (Table 3), we note eighty-three cases sent to the roentgen-ray laboratory with diagnosis of inactive or healed tuberculosis by the preliminary examiner and confirmed by the refer examiner, of which only forty-seven, or 56 per cent., were positively diagnosed under the roentgen ray; and these were all chronic fibrocaseous types of tuberculosis, the very type of which Diemer and MacRae state: "The physical signs in the case of chronic and inactive fibrocaseous tuberculosis are minimal and susceptible of recognition only by the experienced clinician, but the screen findings offer unmistakable evidences of the abnormality in question.". The foregoing statement is certainly not in accordance with my experience, for the physical findings in this type of tuberculosis are invariably positive. As a matter of fact the roentgenologic examination revealed only an average of 54 per cent. positively tuberculous. Forty of the 216 active cases (18.8 per cent.) were pronounced suspicious and in forty, only an abnormality was noted, while in twenty (9.3 per cent.), the fluoroscopist reported lungs negative, failing completely to note fluoroscopic changes departing from the normal. In one of these cases three separate examinations by three fluoroscopists, including myself, were made, and all reported a negative result; yet the physical findings were beyond question.

TABLE 3.—ANALYSIS OF FIVE HUNDRED AND SEVENTY SECOND-DRAFT REJECTS

	Reason the Preliminary Tuberculosis Examiner Referred Case to Refer Examiner	Roentgenologist's Report				Diagnosed Active Tuberculosis by Refer Examiner and Rejected
		Tuberculosis	Suspicious	Abnormality	Negative	
Preliminary examiner found lungs negative	A. History of prolonged contact with, or death in the family from tuberculosis	28	10	4	0	42
	B. Inability to work because of ill health	0	0	1	0	1
	C. 1. Well-defined history of previous pleurisy, pneumonia, frequent or protracted colds, typhoid fever, or any other past illness of a prolonged character which might have been tuberculosis, such as prolonged cough or expectoration, hemorrhage from lungs or expectoration of bloody sputum	37	10	9	1	57
	2. Present history of cough, expectoration, loss of weight or strength, night sweats, fatigue	28	10	5	0	43
	D. Existing cervical adenitis, tuberculosis of the bones or joints, or rectal fistula	1	0	2	0	3
	E. Asthenia and cases in which the man's physical condition was manifestly below par; or evidence of lack of stamina or resistance to disease	17	12	3	0	32
	F. Cases of chest deformity; scoliosis, kyphosis, funnel chest, pigeon breast, flat chest and barrel chest	7	8	2	0	17
	Subtotals	118	50	26	1	195
Preliminary examiner found lung abnormality	G. Cases sent to roentgenologist because of lung abnormality not diagnosed tuberculosis by the examiner, such as bronchitis, bronchopneumonia, emphysema, asthma, etc.	34	18	20	4	76
	Cases sent to roentgenologist diagnosed tuberculosis by the examiner					
	Active	116	40	40	20	216
	Inactive or healed	47	20	14	2	83
	Subtotals	197	78	74	26	375
	Grand totals	315	128	100	27	570

NUMBER OF SECOND-DRAFT MEN DIAGNOSED TUBERCULOUS

It will be observed that, of the 16,589 second-draft men whose history was recorded and who were subjected to a roentgenologic examination (Table 2), 2,367 were diagnosed tuberculous by the preliminary examiners. In 1,843 cases the roentgenologist reported tuberculosis or "suspicious." The refer examiners, however, confirmed the diagnosis of tuberculosis in 884 cases only, of which 570 were chronic active lesions and therefore rejected, while 214 were diagnosed healed tuberculosis and accepted. All of these cases are intact. One of these cases selected at random is of interest and is typical of many accepted under like circumstances, all of whom have rendered efficient military service and are still intact.

E. B. R., aged 22, a private in the infantry, entered the service June 24, 1918. His occupation was that of farmer—working steadily. He was examined for tuberculosis at Camp Lewis, June 26. There was no tuberculosis in the family. Past history: He stated he had had typhoid fever in 1911, and had spat blood for three months before the onset of the fever (aspiration tuberculosis). Present history: He stated that he had had a cough for three days. He said he had "caught cold" on the train, but he stated he had raised sputum from the lungs all his life. His strength was good. He had no night sweats or other complaints. Examination: His height was 65½ inches; his weight was 131 (his highest weight); his general condition was good; the habitus was normal, and his attitude was active. The preliminary examiner reported the lungs negative. The man was sent to the roentgenologist and to the refer examiner on account of "past history." The roentgenologic report was: "Marked increase in density left apex. This is not marked but rather even uniform density. Right apex illuminates much better than left on coughing. Diagnosis: fibrocaseous tuberculosis." (An unjustifiable fluoroscopic diagnosis from findings noted). The sputum was negative. The refer examiner reexamined the man and found impairment of percussion resonance, bronchovesicular breathing, bronchophony, with narrowing of Krönig's isthmus over the upper part of upper lobe of left lung. There were no râles on expiratory cough. The diagnosis was: Healed tuberculosis. The man was accepted for full military service and was soon overseas. He returned from overseas to Camp Lewis for demobilization, Feb. 10, 1919. The soldier stated he had kept up his military duties and had had no sickness until he went into action in the Argonne, Sept. 24, 1918, at which time he was gassed. He was sent to a field hospital, in which pneumonia developed, Oct. 8, 1918. He was confined to hospitals until Jan. 6, 1919, and was then sent home with a convalescent detachment. His weight at the time of demobilization was 138 (7 pounds more than when he entered the service), but he weighed 150 pounds at the time he was gassed.

The preliminary examiner recorded that the general condition was good, the habitus normal, the attitude active, and the lungs negative. The man was sent to the roentgenologist and to the refer examiner because of the history of gassing. (All men stating that they have been gassed are sent to refer examiners.) The roentgen-ray examination was made by one of the refer examiners in this instance, who reported: "Fan-shaped area of increased density extending upward and outward from left hilum to apex. The left apex hazy and does not illuminate on coughing. Diagnosis: fibrocaseous tuberculosis."

Reexamination of the man by a refer examiner revealed identically the same findings as noted on his entrance examination and a diagnosis of healed tuberculosis was made.

The two records were compared and since the man was accepted with a healed lesion and it had remained apparently the same, the man's general condition being even better, he was discharged with a notation made on the certificate of physical examination prior to separation from military service (135-3 A. G. O.) that a healed tuberculosis was present but existed prior to induction into military service and had not been aggravated. The soldier claimed no disability and none was given. Had the refer examiner accepted the roentgenologic diagnosis the man would have been an original reject and the army would have been deprived of the services of an efficient soldier.

A consideration of the data from the standpoint of physical diagnosis was not given by Diemer and MacRae, and I think the fact that the roentgenologic examination cannot supersede physical examination is sufficiently brought out in the data already presented.

VALUE OF FLUOROSCOPY

However, one has only to study Tables 2 and 3 to be convinced that fluoroscopy in the case of certain groups was productive of good results. Its help in separating the wheat from the chaff in the groups in which the preliminary examiners found the lungs negative (A, B, C, D, E and F) was of particular value, bringing to the attention of the refer examiners for confirmation many cases of tuberculosis in men that in some other scheme would perhaps have been accepted by the preliminary examiners only to break down later. Attention is invited, for instance, to 1,015 cases in Group E, Table 2. The records of all show family history negative, past history negative, present history negative, "general condition bad," "asthenic habitus," etc. A footnote states: "Man has always been thin." The lungs are recorded negative, but the man is sent to the refer examiner because of "asthenia," "bad physical condition," etc. Of these 1,015, the refer examiners accepted 774, all with a negative roentgenologic test, on accumulated evidence without reexamination and all are intact. Of the 231 reexamined by the refer examiners, thirty-two were diagnosed chronic, active, fibrocaseous tuberculosis and were rejected, seventeen of the thirty-two being positively revealed as by the roentgenologic test. Of the 106 cases in this group designated as suspicious after the roentgenologic test and reexamined by the refer examiners, twelve were diagnosed chronic, active, fibrocaseous tuberculosis. Reexamination of the 118 reported with an abnormality on the basis of the roentgenologic test revealed three additional cases of fibrocaseous tuberculosis. These classes of cases undoubtedly represent a type that gets into the service and soon breaks down. A study of the other groups in which the preliminary examiners pronounced the lungs negative will reveal a similar splendid service rendered by roentgenology, a service which fully justified its use. Finally, it was of particular value in bringing to the attention of the refer examiners certain Class G cases diagnosed nontuberculous by the preliminary examiners. Tuberculous processes were often missed in these cases on account of coexisting acute and subacute respiratory infections, with loud sonorous and sibilant râles masking not only the character of breathing but keeping entirely in the background crepitant, subcrepitant and typical indeterminate râles. There were 2,859 cases of this character turned over to the roentgenologist and the refer examiners. By means of the roentgenologic test forty-two cases were diagnosed as positively tuberculous. The refer examiners confirmed this diagnosis in thirty-four and they were accordingly rejected. Eight were accepted with healed lesions and are still intact. In addition to these eight, there were thirteen other healed cases in this camp accepted. Of the 228 reported on the basis of the roentgenologic test as "tuberculosis suspicious," eighteen were rejected by the refer examiners. Of the 491 in whom only an abnormality was revealed by the roentgenologic test, twenty were rejected by the refer examiners, and, among the negatives, four were rejected, all on account of chronic, active, fibrocaseous tuberculosis, making in all seventy-six rejects, thirty-four of whom were found by the aid of the roentgenologist. Of the 2,859 belonging to this group, 2,051 were accepted by the refer examiners without reexamination and all are intact, 808 were reexamined. This included 761 found with abnormalities by the roentgenologist and forty-seven pronounced negative after the roentgenologic test but reexamined because the history and the preliminary examiner's findings, although the diagnosis was not positively tuberculosis, suggested its presence. Reexamination by refer examiners revealed four cases among the forty-seven.

PHYSICAL EXAMINATION AS COMPARED WITH ROENTGENOLOGIC FINDINGS

Careful physical examination generally predicts the roentgenologic findings. Roentgenologic findings alone are of little value unless interpreted by one having a knowledge not only of roentgenology but also of tuberculosis from a clinical and pathologic standpoint. The evidence furnished by roentgenology is only one link in the chain of evidence on which the diagnosis of tuberculosis is based. As compared with careful physical examination, the roentgenologic examination, even when done by an expert, occupies a place of secondary importance, so far as the diagnosis of tuberculosis in military service is concerned.

I have pleasure in expressing grateful appreciation to Captain Diemer and to Lieutenant MacRae for their conscientious and splendid work on the board. The closest cooperation has existed between the roentgenologists and the members of the tuberculosis board and this report is not to be interpreted as a reflection on the ability of Diemer and MacRae, for I consider both expert roentgenologists. They are not responsible for the things roentgenology has not done for us.

Furthermore, I do not wish to appear to be an opponent of roentgenology, for I have the utmost confidence in the procedure properly interpreted, but I must protest against the authors' statements regarding the rôle played by roentgenology in the tuberculosis rejections at Camp Lewis and against insinuations as to the unimportance of physical diagnostic methods in wholesale chest examinations.

This article is written, therefore, in a spirit of constructive criticism with a sincere desire to be fair to both the physical and the roentgenologic methods of examination. Both procedures have their place and must be held there. Neither can supplant the other; both are of value. I believe the authors claim more for roentgenology than it should be expected to yield.

GROUP STUDY, A NECESSITY IN OPHTHALMIC RESEARCH *

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In order that there may be a correct understanding of the nature of any eye disease, the clinical and the laboratory findings must be correlated. It is my purpose to urge that there can be no hope of our arriving at an exact knowledge of the occult causes of many of the most serious diseases of the eye by a study of the eye alone. In a vast proportion of the cases that come under the observation of the ophthalmologist, there is no possibility under present methods of associating his observations with complete physical examinations and laboratory findings. His best efforts are hampered and handicapped. It is imperative, therefore, as much in the interest of scientific progress as for the successful conduct of his work, that methods be devised whereby the ophthalmologist may be put in possession of all of the physical facts that have a bearing on the conditions which he is called on to treat. To accomplish this would be practically to revolutionize the practice of medicine. It would replace the individualistic by the combined method of clinical study.

The reason for the lack of unifying influence between the different specialties in medicine is not far to seek. The branches have grown independent of the plant. Individual departments have developed with surprising rapidity, but they have not been coordinated and synchronized. In practice, the work of the ophthalmologist is definitely and specifically limited. It is circumscribed by the orbit: with the conditions outside of the bony cavity in which the eyeball and its adnexa are contained, we are assumed to have nothing to do. But, of course, we know that that is not true. Our work not only is inseparably tied up with every branch of medicine and surgery, but also is related to all of the activities of the individual who comes under our ministrations. People do not come to us in large numbers simply because they cannot see as well as they think they should, but they come to us because they are sick and they expect us to help locate the source of their malady. They are justly impatient when, after having completed our examination of the eye, we consider our work as finished whether it has aided them or not in arriving at such an understanding of their condition as will again restore their bodily health. When ill, the practical man is not satisfied to be compelled to run the gauntlet of a circle of specialists unless he can be made to see the bearing which each of these has on his malady. The failure on the part of scientific medicine to locate the essential origin of many serious diseases is tending to lessen public confidence in medicine as a whole, and the time has come when we as physicians must reorganize our methods of practice, or means will be taken by the public, if not on the part of the state, to direct them for us, with results that may be equally disastrous for the public and for us.

The demand on the part of the public for adequate service for all of the people, not only the poor and the rich, but the mass of workers as well, has grown so insistent that some form of sickness insurance with all of its limitations is inevitable unless we are prepared with some concrete constructive plan which is better. A bromidic phrase that has been repeated so constantly that we have almost begun to believe it is that it is only the rich and the poor who secure efficient medical care. It is not true, even in regard to these two classes. The number of hospitals in the United States in which there is such collaboration between all the members of the staff and which is uniformly applied in all doubtful cases in the clinic is exceedingly small. In the larger number of public hospitals and dispensaries the same individualistic methods are used as there always have been, and the resultant consequence is a vast amount of labor on the part of medical workers with results that are unsatisfactory both to the patient and to the physician. We all know of innumerable instances of those able to pay the most generous medical fees; but, lacking the cooperation of those whom they have consulted, the real importance of the bearing of the findings of each is overlooked and the real diagnosis that might have been secured is missed. Of course, we all have endeavored to meet these difficulties by consultations, and in some instances have definitely arranged group practice; but the fact remains that for the mass of people whose resources are moderate, there exist no methods except through professional courtesy by which complete investigations can be made of cases that are obscure. If neither the very poor nor the very rich are able to obtain relief for their more or less obscure maladies, how much less fortunate in this regard is the great middle class, whose pride on the one hand forbids them to claim charity, and whose narrow purse on the other prevents them from purchasing the necessarily expensive services of high class physicians. The necessity of a rearrangement of the accepted methods is being universally recognized; but to no class of practitioners is its import greater than to the ophthalmologists.

We occupy a pivotal position. With the work that we do every other branch of medicine is correlated. It is impossible that our work should stand by itself. We may eliminate all of those diagnostic factors in which it has long been recognized that a knowledge of the conditions of the eye are important aids, for of course the ophthalmologist must be consulted in many cerebral and spinal conditions, and we are constantly called on to substantiate and interpret through a study of the eyegrounds the condition of the other organs; but there will still exist diseases of the eye affecting the sight the remote origin of which has not yet been determined. These must be determined, and it is as important for us as for our patients that our methods of research be enlarged. The break in the current by our isolation into narrowly defined specialties is the essential cause of the failure of medicine to occupy the dominant position to which it is entitled and which it must soon assume.

THREE IMPORTANT POINTS

In order that I may make clear the thought that I have in my mind, I should like to formulate the prob-

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lem which is not only of great importance to us but is also essential for the public good, and closely concerns our relation to the internist. I shall confine my reasoning to the special branch of medicine which we represent; but while the facts which I will ask you to consider relate with perhaps greater cogency to ophthalmologists than to those in other specialties, they will apply to every branch of medicine. Let me make this broad general statement, which is startling when its import is fully realized:

1. With few exceptions, the most serious inflammatory and degenerative intra-ocular diseases find their origin outside of the eye itself, and in the large majority of cases in tissues that do not come within the field of the ophthalmologist's explorations.

If this be admitted, and it can easily be demonstrated, it follows as a logical consequence that we, as individuals working alone and confining our studies to the eye, cannot ever hope to solve the ultimate causal problems that are daily presenting themselves to us.

The second point on which I should like to touch is the outgrowth of the first. It is this:

2. In order that we as ophthalmologists may reach the highest possible attainments within our own sphere of work, a readjustment of our present methods is imperative. Instead of working alone either as individuals or in ophthalmic hospitals and dispensaries, we must associate together in groups representative of every branch of medicine, so that to each case will be given that comprehensive and inclusive study that will enable us to diagnose with accuracy and to prescribe with definiteness.

But such a revolution in method cannot be easily undertaken. It would seem to connote the breaking down of the foundations on which the whole system of medicine has been built. I shall, therefore, suggest a third point for your consideration. It is this:

3. Changes of such far-reaching social and economic importance are already under way that the higher efficiency which cooperative medical measures would insure are being made a public demand, and it would be a source of pride for us to give form and direction to an advance movement that promises to be one of the greatest of the age.

Let me consider these three points briefly in order. Perhaps the most important work that has been done during the last few years is in biologic chemistry. The mechanism by which that perfect balance is maintained in the ultimate cell, in whatever part of the body, is profoundly disturbed by subtle toxins that find an entrance into the blood. The commonest source of these toxins is some focal infection retained under pressure. Sometimes pathogenic bacteria pass directly into the blood, producing bacteremia; sometimes a filtrable virus slowly percolated from a localized focus of infection, more especially when it is enclosed in bony tissue, is provocative of trouble. The locality which seems to be most commonly attacked is the alveolus. It may, of course, originate elsewhere, as in the tonsils, in one of the sinuses, in a partially filled root cavity of a tooth, or sometimes in a completely filled root cavity. Billings, in his "Lane Lectures" on focal infection, has shown what has many times since been proved, that "from pus and dead material of alveolar abscess and the infected pulp of the teeth, with a proper technic, cultures yield streptococci, chiefly *Streptococcus viridans* and *Streptococcus hemolyticus*, *Staphylococcus aureus* and *albus*, fusiform bacilli and other less important bacteria." Doubtless the endamebas play an important part in the occurrence of pyorrhea alveolaris and permit infection with pyogenic bacteria. The bacteria present in the infected areas are the important factors, however, in the causation of general infection from the focus. If, in a single case it can be shown that disease of the deeper eye tissues has resulted from the poison generated by a circumscribed alveolar abscess, then in no doubtful case of intra-ocular disease are we justified in neglecting to determine, by the aid of roentgenograms, the condition of the teeth. Unfortunately it is not safe for us to accept as conclusive a report of the findings of the most skilled dentists. It is their training and it has been their duty to conserve the teeth as long as possible. When we insist, then, on knowing what hidden conditions may be present we are very apt to meet the passive and even the active antagonism of the dental surgeon. In many cases, too, the external appearance of the tooth gives so little evidence of the condition of the deeper structures that the dentist appears to be fully justified in refusing to consider apparently sound teeth as a source of the danger. Moreover, the whole subject is so new that only the most progressive of the dental men have accepted the conclusion that the teeth may be an essential cause of remote pathogenic changes.

CONDITION OF THE TEETH IN EYE PATIENTS

Somewhat more than a year ago I determined that in every possible case in which there was evidence of disease of any kind within the eyes I would obtain, if possible, a skilled opinion in regard to the condition of the teeth. I was fortunate in having the cooperation in this of Professor McCall of the Dental Department of the University of Buffalo, who is not only a roentgenographer of unusual skill but a brilliant chemist and a trained observer as well. From him I learned that a rarefied area about the root of a tooth is always suspicious. It indicates that there has been some necrotic destruction of the bony tissues. It is often found associated with devitalized teeth. Consequently it is rare that there are any evidences of discomfort associated with it, but this area is largely supplied with rich lymphatic circulation, as shown by the researches of Sappey and later of Noyes and Dewey[1] of Chicago. We already have, then, perhaps all the conditions for the slow filtration of the bacterial toxins.

Independently of the reports of other dental surgeons, I have had with Professor McCall over 100 cases which have been carefully observed and which have received dental treatment.[2] Interesting as the individual study of these cases has been to me, the results when aggregated were even more so. I have them grouped in the accompanying table in order that they may more easily be seen. The patients whose cases are here synopsized came from various localities in New York State and Canada, so that it was not always possible to obtain a culture when teeth were extracted. Dentists, as a rule, are not provided with culture tubes, and it is not a simple matter to make a pure culture from a root cavity. From those that were obtained, however, the results are most interesting. I shall reserve the analyses of the cases for later study. It is interesting to note that in twenty-four of these cases, some form of pathogenic organism was found in the deeper structures of the alveolus. Thirteen of these cases were of retinal hemorrhage, which would bear out my contention that this condition is far more common than is generally supposed, and also, as I have endeavored to show,[3] that retinal hemorrhage is not dependent on the character of the blood pressure, which may be either high or low, but is due to some bacterial toxin usually given off from a focal infection which, attacking the endothelium in the small arteries or capillaries breaks down the tissue and the transudation of blood follows, not as a result of a too strong pressure from behind, but because of lysis in the vessel itself. This view, which I have not found elsewhere expressed, finds support in the observation of Billings, who has shown that the infection from a primary focus is usually hematogenous, the specific reaction consisting of a local inflammation with endothelial proliferation of the lining of the blood vessels and hemorrhage into the immediate tissue. In thirteen cases of cataract, either diseases of the teeth were found to exist or the teeth had all been removed at an early date, and there was evidence of intestinal toxemia. The association of infection with glaucoma and with detachment of the retina is particularly interesting. It leads to the interesting query whether the solution of the continuity in detachment between the retina and the underlying tissues may not be due, as in retinal hemorrhage and in the anterior softenings of the sclera, to the liquefaction of the normal colloids which in a condition of health are found between the retina and the underlying tissues. It is not my purpose to enter into a scientific discussion of the causes involved or the nature of that form of cataract wrongly called senile, but which evidently, as Roemer contends, depends on metabolic changes, but which, as he has not foreseen, is probably of toxic origin. It will be evident that this opens up an entirely new range of inquiry, the importance of which cannot be overestimated but which we cannot carry on alone. It leads me, then, to the second point about which I shall speak, which is the imperative necessity of cooperative methods in order that the results of our research may be purposeful and effective.

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[1] Noyes, F. B., and Dewey, K. W.: The Lymphatics of the Dental Region, J. A. M. A. 71: 1181 (Oct. 12) 1918.

[2] Since I wrote the foregoing this number has been more than doubled.

SUMMARY OF SEVENTY-SIX CASES OF EYE LESIONS WITH DENTAL EXAMINATION FROM JULY, 1917, TO DECEMBER, 1918

Dental Conditions	No.
Apical rarefaction or other evidence of apical infection	59
Infected areas in bone following old extractions	8
Periodontoclasia occurring coincidentally with apical rarefaction	15
Periodontoclasia without apical rarefaction or other infection	2
Doubtful teeth, not extracted	10
No evidence of dental disease	5

CULTURES* CLASSIFIED BY LESIONS

Retinal hemorrhage	Staphylococcus albus	1
	Streptococcus hemolyticus	1
	Pneumococcus	1
	Diplococcus (encapsulated)	1
	Staphylococcus aureus	1
Cataract	Staphylococcus albus	2
	Streptococcus viridans	2
	B. pyocaneus	1
Glaucoma	Staphylococcus albus	1
	Streptococcus viridans	1
	Diplococcus (gram-positive)	1
Inflammatory	Staphylococcus albus	1
	Staphylococcus aureus	1
	Streptococcus viridans	1
Miscellaneous	Staphylococcus albus	1
	Staphylococcus aureus	3
	Streptococcus (various)	2
	Diplococcus gram-positive	2

Summary of cultures: Staphylococci, 11; Streptococci, 7; Miscellaneous, 6.

* All cultures listed were pure cultures. This does not exclude the possibility of loss of other organisms more difficult to cultivate.

NECESSITY OF COOPERATION

In endeavoring to make these inquiries I was much more fortunately situated than many of my colleagues. The courtesy of my friends, the biologists, always placed many laboratories at my disposal; but there are limitations beyond which courtesy cannot be pressed. Many of these patients also had blood counts and Wassermann tests. Some of them were gone over with great thoroughness by internists, but some of the most promising cases were those in which it was most difficult to make such cooperation available. They were people of moderate means who were unwilling to accept gratuitous treatment. No arrangement had been made by which it was possible adequately to compensate those who were contributing important results. They were not hospital patients on whom the staff's efforts might be concentrated. They were only a few of many who should have been given the same intensive study.

These cases made very clear the truth of my second proposition, that if we as ophthalmologists hope to solve such important questions as the cause and prevention of cataract, the reasons for glaucoma, and the nature of the chemistry which detaches the retina, we must have the laboratory invariably at our disposal, and we must have as collaborators all the other workers whose labors can have a bearing on these vital conditions. Recognizing its importance, how can this be secured? Fortunately, now when its necessity has become so apparent, the whole country has had an object lesson in the practical value of collaboration on the part of medical men on a large scale. In the first place, we have had the medical examining boards everywhere throughout the country. The facts which they have elicited in examining the men of draft age have been of such real value that it would not be a difficult matter to make the public realize how this work might be extended to include all of the people of the United States.

The ophthalmologist is the advance guard in the new movement. I have endeavored to show very briefly to what extent we, as ophthalmologists, are dependent not only on our own findings but also on a full and comprehensive understanding of the physical condition of the patient—if we expect intelligently to manage the most serious diseases which we are called on to treat; but having found out where the defects lie, we are still limited and hampered in a large number of the most important cases in having no place to which we can send them, with the assurance that their management will be in accordance with an understanding of the general as well as of the local conditions which are found. It is often impossible to secure a culture when the infected area is opened, and we are frequently unable to secure for our patient the treatment that would seem to be imperatively demanded; not because of difference of views but because of an inability to get that entire cooperation which can be obtained only when the light is thrown on an obscure condition from every angle. The same limitations and embarrassments occur in our medical relationships.

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[3] Lewis, F. P.: A Bacterial Toxin as the Cause of Retinal Hemorrhage, J. A. M. A. **70**: 1813 (June 15) 1918.

I have in mind a pathetic case which came under my care recently through the courtesy of a friend in a nearby city. Himself a skilled ophthalmologist, he had discovered a double neuroretinitis in a young woman who had become so blind that she had to be guided about. Because of a stillborn child the family physician made a diagnosis of syphilis and persisted in the use of mixed treatment, although the sight continued to fail. She was urged to come to Buffalo in order that she might be taken, ethically, from a treatment that was obviously pernicious. When she was put under hospital care she was found to have albumin with hyaline casts and a negative Wassermann reaction. Both her eyes and her general condition responded to proper eliminative treatment, although she will always have exceedingly defective sight if progressive atrophy does not destroy it entirely. With a suitable group diagnosis such a thing would be impossible, because each examiner would be obliged in a general conference to justify his position, and his views could be accepted only after he had made the necessary findings and these were properly recorded.

If we, then, as ophthalmologists, are obliged to admit that our most careful examinations are limited and insufficient, the great problem that is forcing itself on us for solution is to determine some way by which complete methods of examination with well considered measures of treatment shall be secured for the masses of the people. The necessity is self-evident. That there are difficulties to be overcome is beyond question. But our men who in military encampments have learned the advantages of cooperative medicine will never be satisfied with anything less effective. Neither will the physicians who have had the opinions of the ablest men in the army be willing on returning to private practice to relinquish such benefits. A very ordinary young surgeon whom one would never think of accusing of idealism said to me that the satisfaction of practicing medicine under conditions in which a scientific and not a monetary consideration was the controlling motive had given him a degree of genuine pleasure of which he had not dreamed.

Why should not our medical examining boards which have been in active service all over the country be held together to continue to do for our civil populations what they have so well done for our soldier boys? The medical advisory boards could still be consulting bodies. The organization could be instantly called into existence again. It should be, as before, under federal control. Its functions should be limited to diagnosis, and it must of necessity work in the fullest harmony with the family physician. Who can estimate the amount of disease that could be prevented? Who can calculate the enormous saving which would result to the people? Our hospitals provide only for the cure of the sick. Each should have its facilities so enlarged as to become a diagnostic clinic developing the far higher phase of usefulness, that of preventive medicine. I am not hoping to present any completed and perfected plan. I am endeavoring only to make clear that the imperative corollary of modern medicine is cooperation on the part of medical men with each other and with the general public, and I am hoping that this section may be among the first to take measures looking toward the development of some plan which will at once add to the dignity and the efficiency of the profession to which we have devoted our lives, and in doing so to confer on mankind benefits of incalculable value.

ABSTRACT OF DISCUSSION

Dr. Walter R. Parker, Detroit: Dr. Lewis has presented a very interesting subject in diagnostic units. I am not so sure that it would not be better to devote our time to the organization of our present standards rather than to try to instill a little keener appreciation of the necessity of these general examinations on the part of the members of our branch of the profession. Dr. Lewis has very carefully chosen as his subject, "Group Study." In the organization of groups of men careful differentiation must be made between group study and group practice. Group study is idealistic. Some group centers for "practice" have been successful. Some have not. Organization alone will not answer the question. Repeated examinations alone will not answer the question. Organization and repeated examinations cannot take the place of a scientific education. Dr. Lewis suggested that the federal government have control of these units. It is possible that that will work out, but the results which have been attained through the management of the railroad companies and the telegraph and telephone companies, has not popularized such management. No matter how the organization takes place, there must be some authority which can enforce proper ethical standards and proper scientific treatment. We all know that we should have these general examinations, and in the everyday business life it is easy not to insist on getting them. I believe some change in that direction is going to take place soon, therefore let us look after the individual so that when the organization is formed the responsibility will be on the individual and not on the organization itself.

Dr. Alexander Duane, New York: Dr. Lewis suggests an ideal, which, as increasing experience shows, is not only desirable but also necessary. The more we study the subtle interrelations between the eye and other organs and realize the frequency with which we encounter them in our practice, the more we feel the necessity of the sort of group study that he advocates. That is true not only for scientific, but also for economic reasons. At present even in large cities, we are in an unfortunate position as regards our patients who are less well-to-do. Such a patient may come into the office with an eye affection which requires a whole series of examinations, and the ordinary purse nowadays is not equal to the demands made by a round of visits to high-priced specialists. Moreover, in the adjustment of appointments required in order to see every one of a set of men scattered over a large city valuable time may be lost. If a physician could command the services of a diagnostic institution, to which he could always refer any patient, whether with large or moderate means, the patient would receive the requisite series of examinations expeditiously and systematically, and would emerge with at least a complete and authoritative diagnosis. As a half-way step in this direction it has been suggested that in the larger cities each hospital specialize in some particular point of diagnosis, serologic and bacteriologic tests, oronasal and gastro-intestinal examinations, etc. But this plan fails to secure the very thing that, as Dr. Lewis points out, forms the essential feature in group study, namely, the correlation of different kinds of examinations by experts constantly in touch with each other and working hand in hand. Far better is the conception of a central institution—one in each of our large medical centers, ideally and completely equipped for diagnosis in all branches. Such an institution might with advantage leave treatment to be conducted at other hospitals, and devote itself solely to diagnosis and research. Such an ideal was promulgated over three hundred years ago by Francis Bacon, and such an ideal we might well try to realize today.

Dr. Albert E. Bulson, Jr., Fort Wayne, Ind.: In the not far distant past many ophthalmologists were inclined to look no further than the eye for the cause of some obscure eye diseases, but that criticism hardly holds true today as applied to the well trained ophthalmologist. We realize that we must not be ophthalmologists too exclusively, but that our explorations must go outside of the eyeball, and in arriving at an exact knowledge of some of the serious eye diseases we must take advantage of physical examinations and laboratory findings which are better carried out by others as proficient in their special lines as we are in ours. In discussing the group study of cases, Dr. Lewis has referred to the economic phase of the question, and here we are confronted with three classes of patients: first, those able to pay fully, those able to pay something, and those unable to pay little, if anything, essentially the charity cases. From the group study standpoint the first group should be cared for by calling to our assistance specialists in other branches and whose findings we need. The second group, likewise, may be handled in a similar manner, but with the understanding mutually agreed to by those in consultation that the work is partly gratuitous. The third, or charity group, belong in the clinics of our teaching institutions, or should be referred to hospitals where group study is made a part of the hospital social service work. There is a real necessity for cooperative medicine in all of our hospitals, whether connected with teaching institutions or not, and many of the ills which state medicine is supposed to correct for the poorer classes could be corrected by increasing the facilities of our hospitals so that diagnostic clinics, conducted by competent men, could be thrown open to the people who are unable to pay for private service. State medicine now being advocated for this country has not proved satisfactory or efficient from a medical, sociologic or economic standpoint in any country where it has been tried. It is class legislation of a socialistic and paternalistic nature which threatens disastrous results for the medical profession as well as for the public. No better way to stifle medical progress, do away with individual initiative of medical men and destroy self-respect and independence of the people, can be found than to put into force some form of paternalistic medicine. The poorer classes are in need of better medical and surgical attention as also hospital care, but this can be obtained by better cooperation on the part of both medical men and hospital organizations, both of whom always have been and always will be charitable, but the best results will not be secured by placing medicine under federal control.

DR. RICHARD J. TIVNEN, Chicago: Dr. Lewis has spoken of a problem which has long been a source of difficulty to most of us and his candor and analysis will undoubtedly be productive of much good. We are all, I am sure, in agreement with him, on the proposition that we, as ophthalmologists, cannot, working alone, make the scientific progress our patients have a right to expect of us and which we ourselves keenly desire. "Group study" along the lines suggested by Dr. Lewis would solve the difficulty. It is, however, as he has said, rather hard to inaugurate and continue such a plan of investigation. A campaign of education and propaganda among ourselves and among our confrèrs in other departments of medical work offers one promising method of solution. The ophthalmologist is not the sole culprit in the present unsatisfactory arrangement. The internist and the surgeon are equally culpable in not availing themselves more frequently of our services, investigations of our specialty. At most medical meetings—our own especially—this exclusion, this segregation, is accentuated by having the section work carried out in an exclusive way, entirely divorced from the work of other sections. We come to these meetings to attend this section only, rarely do we hear from workers other than our own Fellows; no opportunity is provided for us to get in touch with either the Fellows or the work of other sections, with the result that we go away as we came—eye men —to remain so to the end of the chapter. If a joint meeting, or several joint meetings, could be held with surgeons, internists, and all other specialists in attendance, and Dr. Lewis had read this paper before such a gathering, tremendous good would have been accomplished in furthering the "group" or "team work" study which Dr. Lewis advocates. I offer this as a suggestion to the officers of the section, that some means be provided at these meetings for a closer and more intimate association and interchange of scientific opinion with our fellow workers in other departments.

DR. OLIVER TYDINGS, Chicago: No injury can be offered to any organ of the body which will not have its effect on the eyes. With regard to the team work suggested by Dr. Lewis, there is not a conscientious man in the practice of ophthalmology who has not felt in need of just such work. Where is the remedy? Let the physicians and ophthalmologists refuse to aid any organization or institution whose sole object is to secure dollars. The government should be at the head of the national board, and every school should be under the control of national or state institutions.

DR. GEORGE S. DERBY, Boston: In Massachusetts an ophthalmologist can have special or general examinations made for $10 by sending the patient to a diagnostic clinic. There is an extra charge where the roentgen ray must be used. It has worked well up to the present time. The plan was discontinued owing to the war, but it will be put into operation again.

DR. GEORGE H. PRICE, Nashville, Tenn.: Diseases which find expression in the eye, due to constitutional involvement, can and should be treated as far as their diagnosis is concerned, by those most able, and best fitted to do that particular thing. In some communities it would be impossible to have at command the facilities at hand in the large centers. Ordinarily many cases come to the ophthalmologist concerning which he can reach a definite conclusion and apply those means which will reach the seat of the trouble, whereas, in others it would be almost impossible for him to reach a positive conclusion as to a definite single factor producing a disturbance.

DR. F. PARK LEWIS, Buffalo: As ophthalmologists we are occupying today an absolutely impossible position. We are endeavoring to do work without the agencies necessary to do it. We must devise some method by which the average man without hospital facilities at his command can get added knowledge to do that. The basic idea in my mind is community clinics.

THE AUTOTOXIC FACTOR IN SYMPATHETIC OPHTHALMIA [*]

ARNOLD KNAPP, M.D.
NEW YORK

An attempt to unravel the mysteries of sympathetic ophthalmia has been made by Elschnig, following an idea of Bail, by regarding it as an anaphylactic phenomenon. To explain the onset of inflammation in the healthy eye, he has assumed an additional factor in a general disease or autointoxication, and asserts that since following out measures directed to relieving this toxic state, no cases of sympathetic ophthalmia have been observed at his clinic. While the anaphylactic theory, though offering many suggestive lines of thought, has been criticized by some, especially on clinical grounds, and corroborated by others, as in the excellent research work of Alan Woods, the solution of this problem is still far in the future, on account of the many difficulties that belong to a most intricate chapter in serology and immunology. It is therefore needless for me to enter into a discussion of these questions on the basis of clinical observation, yet I venture to believe that the publication of the reports of four cases concerning the autotoxic factor in sympathetic ophthalmia may be of interest.

Attention has previously been drawn to general disturbance of health in sympathetic ophthalmia, and some have held that the constitution of the patient must be regarded. According to Schmidt-Rimpler's theory, in which Panas is of accord, sympathetic ophthalmia can attack only a person who is already ill. Elschnig assumes the presence of a somatic anomaly consisting in a constitutional disturbance, nephritis or injured eye is now white; there is a secondary cataract, with posterior synechia; light projection and tension are normal.

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[*] Read before the Section on Ophthalmology at the Seventieth Annual Session of the American Medical Association, Atlantic City, N. J., June, 1919.

The autotoxic factor depended on the following: There was generally a history of improper diet and overeating, often associated with constipation. Examination of the stools was made by Dr. Dwyer in two of the cases and gave a highly toxic, acid stool, large excess of skatol and indol and exclusively gram-positive bacteria. Treatment, which was the usual one practiced in sympathetic ophthalmia, namely, mercurial inunctions, sodium salicylate, and pilocarpin sweats, did not seem to have very much effect. It should also be mentioned that the elimination of associated infections, abscessed teeth, and nasal sinus empyema did not exert any influence on the course of the disease. Regulation of the diet, thorough catharsis and colon irrigations seemed to be our most effective agents.

Objection has been raised against Elschnig's hypothesis of an autotoxic state in sympathetic ophthalmia; at least the demonstration of the symptoms and changes in autotoxemia have been vehemently attacked and dismissed as inadequate.

Treatment in sympathetic ophthalmia usually consists in mercury by inunctions, which is the remedy favored by the German writers, and large doses of sodium salicylate, by which Harold Gifford has obtained such brilliant results. It is true that in the cases of serous sympathetic iridocyclitis, the attenuated form, the patients usually get well, and it is hard to say how much any treatment helps. At any event, we do not know in what way either mercury or sodium salicylate acts in these cases.

I realize the temerity of advocating autotoxemia at the present day, and I am fully conscious of the many imperfections in the presentation of these four cases from an autotoxic standpoint; yet I feel the importance of investigating for a toxic factor in sympathetic ophthalmia, and if found present, its elimination in a prophylactic endeavor, as Elschnig suggests, cannot be passed by.

10 East Fifty-Fourth Street.

ABSTRACT OF DISCUSSION

Dr. Louis F. Love, Philadelphia: Dr. Knapp's theory of autointoxication has always appealed to me as being most attractive, but that there are other causes is illustrated, I think, by the case of Sister X, a religieuse, who was referred to me on account of rapidly failing vision in the right eye for three days. The patient stated that the eye had never been sore until three days ago, when vision was obstructed by a heavy cloud or haze so marked that she could not make her way about alone. On examination I found that vision in the right eye was 20/C with a correction 20/50. The eye showed slight pericorneal injection, the aqueous was cloudy and there were a few small deposits on the posterior cornea; no accurate view of the fundus was obtainable. The pupil was bound down by a plastic iritis, and could not be dilated under frequent instillations of cocain and atropin. About two years previously the left eye was removed because of a severe corneal ulceration due to a "gray ulcer." At that time a gold ball was implanted into Tenon's capsule. The socket appeared to be white and clean, and there was little or no injection of the conjunctiva or subconjunctival tissue. On making strong pressure on the gold ball toward the apex of the orbit, acute pain was elicited. The gold ball was removed. It was firmly adherent to Tenon's capsule and to the surrounding structures. I had to dig it out. It was in a perfect state of preservation, and there was apparently no disease of the capsule or surrounding structures. Energetic treatment was instituted, consisting of the instillation of cocain, atropin and ethylmorphin hydrochlorid (dionin), the application of stupes, the internal administration of quinin and sodium salicylate, sweats, mercurial inunctions and the application of leeches on the mastoid region and on the temple. Next day there was a most remarkable improvement in vision. The eye immediately became quiet and the aqueous was clear, but attempts at dilatation of the pupil were still unsuccessful. It was then discovered that several strong bands of iritic adhesions were present. In about a week the patient was practically well, vision with the old correction being 20/20. The pupillary space was clear, the nerve edges were plainly discernible, and beyond a few choroiditic spots of absorption no gross changes were apparent. The point of greatest importance brought out by thi case is the question whether the implantation of a gol sphere in Tenon's capsule is as safe a procedure as th implantation of a globe in the scleral cavity as performed i the Mules' operation.

Dr. George H. Bell, New York: I believe that it is possible for sympathetic ophthalmia to be produced by autointoxication from errors of diet. The case which interested me especially was the patient who had been a great eater of sweets. This patient had highly acid and toxic stools. These highly acid stools were reduced to a mild acidity when the patient was given a sugar free diet. That is one reason why I claim that sugar is a toxic substance. The sugar is acted on in the stomach by bacteria; fermentation takes place and several organic acids are produced which cause acid fermentation, hurrying the food out of the stomach and carrying the acid into the intestinal tract. As a consequence, poisons (toxins) are formed which are absorbed into the blood, causing autointoxication, and a train of toxic symptoms. In every case of sympathetic ophthalmia we should examine the feces and the blood, and we should make a diligent search for focal infections, before instituting any form of treatment. Last, but not least, we should have a constant supervision of the diet of these patients. The diet should contain sufficient base forming elements to neutralize the acids formed; in other words, to prevent acid poisoning.

Dr. S. Lewis Ziegler, Philadelphia: We should distinguish our relations of autotoxemia. There is no question that sympathetic diseases may be exaggerated, or made worse by autotoxemia, but as to its being a positive factor, there is some doubt. I think that the autotoxic condition is local, originating in the injured eye and being carried to the other eye. The toxic condition is manifested in the other eye through a certain chemical perverseness. We should consider the chemistry of the eye and the lymphatics of the eye. We know chemistry can do as much harm as germs. The second suggestion I wish to make is that turpentine is an excellent remedy in these cases. A patient who would not yield to any treatment recovered under the use of turpentine, ½ ounce in a 4-ounce mixture. The action is somewhat similar to the action manifested in the treatment of typhoid ulcer. Turpentine is useful in all congestions and in serous iritis it is almost a specific.

Fish in Relation to Mosquito Control in Ponds.—Under the direction of the U. S. Public Health Service, Samuel F. Hildebrand of the U. S. Bureau of Fisheries, conducted an investigation into what use, if any, could be made of fish for the purpose of controlling malaria by annihilating mosquitoes and their larvae. The result of his work was very encouraging. He found that *Gambusia affinis* is especially suitable for antimosquito work because (*a*) it seeks its food at the surface; (*b*) it is very prolific; (*c*) it gives birth to well developed young, therefore requiring no special environment for depositing and hatching the eggs; (*d*) it lives and thrives under a large variety of conditions and frequents areas especially suitable for the support of the mosquite larvae; (*e*) it usually lives and multiplies in ponds stocked with predacious fishes, providing it has very shallow water for refuge. The "star headed minnow," *Fundulus nottii*, was also found to be of value in antimalaria work. Its habits are very similar to those of *Gambusia*.—*Pub. Health Rep.* **34:**1113 (May 23), 1919.

PROCEEDINGS OF THE ATLANTIC CITY SESSION

MINUTES OF THE SEVENTIETH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, JUNE 9-13, 1919

(*Continued from page 1844*)

THE SCIENTIFIC ASSEMBLY

THE GENERAL MEDICAL MEETING

Thursday Afternoon, June 12

A meeting on general medicine was held on the Garden Pier, June 12, at 2 p. m. Dr. Walter L. Bierring, chairman of the Section on Practice of Medicine, presided.

Address of Col. P. Nolf

PROTEOSE THERAPY BY THE INTRAVENOUS METHOD

Lieut.-Col. P. Nolf of the Belgian army, professor of physiology of the University of Liége, Belgium, said: Before the war, active measures against infectious disease had been divided into three groups: vaccines, serums and specific chemical substances. Lately a new therapy had been developed, called "proteose therapy," consisting of administration of protein by the intravenous method. Proteins, or "antigens," as they had been called, were characteristic toxins of animal or vegetable nature, foreign to the human body. The blood could be transformed into such a toxin by using merely the serum, or the corpuscles placed in distilled water. The introduction of this into the vein could produce the protein reaction, or protein shock. This shock was the effort of the organism to fix and assimilate the antigen introduced into the veins. If the introduction took place slowly, as in subcutaneous injection, the reaction was mild; if rapidly, as in intravenous introduction, the shock was more marked. In treatment for infectious disease, shock was avoided, but a mild reaction was advantageous. Small intravenous doses were preferable, but the technic was to be undertaken only by a physician conversant with its dangers, and careful watch was kept of the pulse, to note rapid fall of blood pressure. Slight palpitation, headache and rise of temperature followed, but passed off with profuse sweating, and improvement of the infectious symptoms was noted after one or two injections. Specific vaccines were more accurate, but both methods could be used in combination to effect a cure. The intravenous method was more rapid and gave better results in doses 1,000 times smaller than the subcutaneous route.

DISCUSSION

Dr. Henry Sewall, Denver, asked if there was any difference between the specific and the nonspecific antigen, and if the therapeutic results did not fall under the heading of desensitization rather than immunology.

Dr. Nolf said that specific therapy was more accurate, but one was in a hurry in cases of septicemia. One did not, therefore, wait to isolate the germ of the disease, for during that time the patient might get worse. One had to get in the dose of peptone quickly, and in the meantime the vaccine could be prepared, and it was often found that the patient had improved even before the specific vaccine was given.

Dr. S. H. Meltzer, New York, asked how the technic of intravenous injection was so slowly accomplished.

Dr. Nolf said that they utilized a syringe of 10 c. c., using a solution of 10 per cent. peptone, sterilized, and very clear. It was injected into the vein with a very fine needle, so that the flow took place drop by drop, during five minutes of time. If the patient was in bad condition, 250 c.c. of isotonic salt solution was put in and, the peptone [illegible] reaction was produced, as in the use of the concentrated solution. Occasionally 0.5 or 0.25 c.c. of 1:1,000 solution of epinephrin was used to avoid shock, in patients with very low blood pressure.

Dr. H. H. Hoppe, Cincinnati, asked if Dr. Nolf had had experience with meningitis.

Dr. Nolf said that this method was for general systemic and not for localized infections. It had been used in meningococcic septicemia.

Address of Dr. Senichi Uchino

NEW PLAN FOR IMPROVEMENT OF NATIONAL HEALTH IN JAPAN

Dr. Senichi Uchino, chief medical officer of the expert sanitary control board of the Home Department, Tokyo, Japan, said: As an urgent problem concerning the public health of Japan, a special board of investigation of national hygiene, besides the central sanitary board, was established in June, 1916, for the purpose of investigating and discussing all subjects relating to the preservation of national health.

The board for the investigation of national hygiene came under the control of the minister of state for home affairs, and the members of the board were appointed by the cabinet, not only from the high officials of all the departments concerned, but also including those persons who were experienced in such matters.

The matters which, it was decided, are proper for investigation include sucklings, infants and schoolchildren; tuberculosis; venereal diseases; leprosy; insanity; clothing, food and houses; hygiene of farm villages; and statistics.

The real condition of the nation's health must be carefully studied, and all the causes which are detrimental to it must be ascertained, and every means by which these causes can be counteracted eradicated, so that the health of the nation can be maintained and improved, must be investigated.

All these investigations must be made statistically, so that the present status of our national hygiene may be made manifest and the causes thereof accurately stated. All the theories of the West must be scientifically studied, as well as all the applications made thereof among the pioneering nations of the West. Often it may be found necessary to investigate personally the actual state of things in the West. To accomplish this object, those who are especially versed in public health study are to go abroad. This was what we expected to accomplish by establishing the present board.

The establishment of this board was really a new plan which organized during the last war. But the investigation is not yet concluded, and this hard work must be continued several years longer. Consequently, I cannot today report the results of our investigations. I believe, however, that the completed report of the results of this investigation will offer useful knowledge to those who have an interest in the public health of all the nations in the world.

DISCUSSION

Dr. W. Bierring said that this line of investigation was very much what was proposed in this country for the cooperation of various divisions associated under one central

Address of Major S. T. Lee

SOME DIFFERENT ASPECTS OF INFLUENZAL PNEUMONIA AND PEST PNEUMONIA

Major S. T. Lee, surgeon major, Chinese army, and Chinese delegate to the Interallied Sanitary Conference, Paris, said that last fall, when passing through this country to return to China, he heard much discussion as to whether the "flu" epidemic originated in China, the home of many curious and undesirable things. He would take this opportunity to present some differences between the pest pneumonia epidemic in China and influenzal pneumonia. In 1910-1911 there was an epidemic of pest pneumonia in China, with a death total of 50,000 and no recoveries. This occurred in Manchuria and northern Mongolia, disseminating itself along the Chinese eastern railways and lines of travel. In 1917-1918 another epidemic with a death total of 12,000, took place in southern Mongolia through the highways passing through the great wall. A third epidemic, localized in the central province of Sujan, took place this year, with eighty-three deaths. These epidemics had been proved to be due to plague and plague only. They took place in the winter months among the poorer classes. A plague bureau was instituted at Harbin, with branch hospitals, which, in normal times, were general hospitals, but were capable of being turned into emergency hospitals. This bureau had been able to keep the northern part of Manchuria free from plague.

The "flu" epidemic of 1918 broke out in separated villages, often separated from each other by uninfected areas. In some places the nervous types predominated, in others the gastro-intestinal types of the disease; there were few pneumonic types. Reports of plague, typhoid and of dysentery came from these places, but investigation showed that the disease was influenza.

This would give a general idea of the two epidemics prevalent in China. Dr. Lee said that in France he had served in a hospital last August in which all stages of the disease were seen, from mere cold and catarrh to pleurisy, pneumonia, empyema, abscess of the lung, and finally septicemia. At necropsy all the usual bacterial findings were made, but plague bacilli were never found. The epidemic could therefore be differentiated from the Chinese pest pneumonia. However, studies were being made in England and France to establish the identity of the filtrable virus, which was supposed to be the factor in influenza. This might be proved to be related to plague bacilli, but the bacteriology of the question was yet unsettled.

In regard to clinical differences, in influenzal pneumonia the lung symptoms persisted longer, there was more marked nervousness, and the pneumonia was a secondary complication superimposed on the primary disease. The features of plague pneumonia were different. In this disease forty-eight hours was the average course of the malady; in influenza from three to four days was the course, counting from the first appearance of the bloody sputum, which occurred in both types.

In regard to epidemiology, plague pneumonia occurred during the winter, whereas the grip pneumonia was at its height in autumn. Plague pneumonia occurred among the poorer class, and in influenza it occurred among all classes indiscriminately. In plague pneumonia, direct contact was necessary to contract the disease; but infection was often hard to trace in influenza. Nurses and physicians taking proper precautions did not contract plague pneumonia, but they frequently contracted influenzal pneumonia. In the laboratory examination of two persons who survived the plague pneumonia of 1918, plague bacilli were found in the sputum sixty-two and forty-two days after recovery from this disease. Carriers had been found in this, as in other infectious diseases.

DISCUSSION

Dr. Clinton Day, Hart, Mich., asked what was the general treatment in these cases.

Dr. Lee said that they had tried serums, but had given them up as hopeless.

Dr. Mener, New York, asked what precautions the physicians and nurses used.

Dr. Lee said that they avoided direct contact. They used the protection of masks and protective suits, gloves and aprons, which they removed on leaving the hospital. They also took an antiseptic bath. They wore goggles, as infection sometimes attacked the conjunctivae. In the second epidemic no deaths occurred among the medical personnel.

Captain Riggs, U. S. Navy, asked the dimensions of the third epidemic.

Dr. Lee said that it was confined to a single village and did not spread, as methods of handling it had been learned.

Address of Dr. John Constas

PREWAR AND POSTWAR IMPRESSIONS IN THE BALKANS

Dr. John Constas, delegate of the Greek army, said that Greece, and also the unfortunate nations of Serbia and Montenegro, had been at war since 1912, so that the peoples had suffered more in proportion, with the duration of the war. Commercial and medical supplies had been more interrupted. The treacherous and brutal Bulgars had proved the axiom that "birds of a feather flock together" by finally joining the Teutonic forces in spite of the persuasions of the Allies. At the beginning of the world war, the Greeks, under the régime of Constantine, the tool of the kaiser, were seriously handicapped, and were kept from joining the side of the nations fighting for humanity. However, it was psychologically impossible that a nation whose ancestors first gave the world a democracy should be kept back from their right to fight for freedom. The Greek nation passed through a very trying period, and during the days when the Mediterranean swarmed with submarines the true state of affairs of the Greek and Serbian armies and medical service were never known, though later when channels of news were cleared, the facts began to sift through. The frightful scourges of typhus and influenza, as they affected the Serbian people, were then appreciated. One fifth of the Serbians perished as a result of disease conditions. If not for the angels of mercy from America with nurses and ambulances, these terrible diseases would never have been checked. The whole sentiment of Serbia, Albania and Montenegro was one of heartfelt gratitude and more than gratitude for the American aid. None of these nations would ever forget what this country had done for them, so long as the earth should circle in its course.

THE GENERAL SURGICAL MEETING

Thursday Afternoon, June 12

A general surgical meeting was held on the Garden Pier, Thursday, June 12, at 2:30 p. m. Dr. John T. Bottomley, Boston, assisted by Dr. George P. Muller, Philadelphia, presided.

Address of Sir William Arbuthnot Lane

Sir William Arbuthnot Lane, London, England, said: I am delighted to be among you again. There may be some difference of opinion as to whether the American nation might have gotten into the war sooner, but there is no difference of opinion as to what the American medical profession did when war was declared. At the time I was over last I was much interested in a hospital for the improvement of those poor fellows whose jaws and faces had been partly torn away. We did some creditable work in that line. But now the war is over—we have almost forgotten it in England, which seems well—but the things we have learned during the war in regard to surgery we would like to carry on for the benefit of the races to come. It was my good fortune when I was here ten years ago to make the acquaintance of that great surgeon, Dr. Forrest Willard, who brought me to his institution. I have seen a good many wonderful things in the States, but the two most wonderful were the Willard Institute ten years ago and the Forsythe Hospital in Boston last year. They are taking care of the future. When this hospital of ours for mending jaws and faces shall have served its usefulness for the soldiers, I asked them if they would allow it to be used for the coming generation. I told them about the Forrest Willard and its wonderful work, and they said if we could establish such an institution as that they would give the land and the money. At the same time we will ask those people at the Forsythe institution to give their help and advice, so that we may have a dental institute in connection with the other. This we expect to accomplish.

Address of Dr. A. Depage

EMERGENCY OPERATIONS AND CONTINUITY OF TREATMENT

DR. A. DEPAGE, Belgium, said: I wish to develop two points which are of particular interest: The first of these concerns the emergency operating done during the war. When the Germans made the first drive in 1914, the wounded men were transported in most piteous condition to hospitals situated from 40 to 60 miles behind the line, and did not get there before from twenty-four to forty-eight hours. Then a hospital was opened 6 miles behind the lines, and we were able to get the patients from four to eight hours after they were wounded. This was great progress, but it was not enough, because we had such a heavy mortality. Then were created the advance post hospitals, only 2 miles behind the lines, and we got patients between two and four hours after they were wounded. These advance post hospitals were supplied with surgeons and nurses and material from a private hospital at Le Panne, and the mortality was reduced from 65 per cent. to 45.

The second point is the continuity of the treatment. This means that the patient should be treated by the same surgeon until completely recovered. Therefore this hospital has been enlarged in such a way that the treatment can be modified for the welfare of the men. The hospital is in several departments, with an experienced surgeon at the head, then six chief surgeons.

Address of Dr. R. Picqué

THE ADVANCED LINE SURGICAL STATIONS

DR. R. PICQUÉ, Medical Major of the French Army, and Professor in the Faculty of Medicine of Bordeaux, said: The formidable power of modern engines of destruction, and the number of men employed, has rendered necessary a parallel development of sanitary formations; the long duration of the war has permitted these formations to be realized. Hence the large evacuation hospitals (H. O. E.) of the army were organized to receive the large number of lightly and more severely wounded. But the seriousness and severity of wounds from artillery projectiles with resulting shock, hemorrhage and the rapid development of gas gangrene has rendered necessary the formation of surgical stations in the advanced line, operating in touch with divisions and Army corps. Up to the line, they stopped and here treated the most severely wounded, those unable to stand transportation, and thoracic, abdominal, dismembered and shock cases. However, even these stations were not sufficient, because of the terrible hemorrhage cases (femoral, axillary, carotid and pulmonary), in which the wounded arrived in dying condition to the advanced surgical stations.

Then, during that period of the war of strategic position,, were created on the western front even more advanced stations, to within 2 or 3 kilometers of the front lines, up to the opening of the evacuation trench. To save the dying hemorrhagic victim it behooved us to hasten the most advanced surgical posts or stations, branches of the group of advanced surgical stations of divisions in direct touch with the first aid stations of the battalion.

These most advanced surgical stations are subterranean, dug in, sometimes in the rear of a mountain (Vosges), on a ridge (as Argonne, Aisne), or at other times deep down under an open ground (Somme, Champagne, Flanders, Artois).

The object of the advanced surgical station is to restore the shocked, to operate if needed, to transfuse blood if necessary, and then to treat the patient on the spot for several days before his transfer in an ambulance. This is the antishock station.

Address of Prof. Paul Bégouin

TWENTY-EIGHT CASES OF CRANIOPLASTY

PROF. PAUL BÉGOUIN, Bordeaux, France, said: I performed cranioplastic operations on twenty-eight patients from August, 1915, to December, 1918, twenty-six times by cartilage transplantation according to the Morestin and Gosset method, and two times by bone transplantation according to the method of Delagenière.

My technic has been as follows: After shaving and disinfecting of the head with iodin, the patient is anesthetized with chloroform. By means of a semicircular incision going a little beyond the lower semicircumference involving the loss of bone substance, the hairy skin is incised as far as the bone; afterward the knife travels between the brain and the skin and a flap is thus created and raised. In the second step one frees every part involving bone loss from its adhesions both to the brain and to the dura mater. This is effected with the point of the knife, the brain being constantly protected by the end of the index finger. One ends by passing the end all around to make sure that the brain and the dura mater are entirely detached all along the circumference.

The second step of the operation consists in taking a cartilage transplantation. The region of the costal border has been asepticized at the same time as the head. It is now placed aside and surrounded by a clamp. With one stroke of the knife on the costal border and parallel to the latter, one makes an incision of 0.08 m. as far as the cartilage just outside the right muscle of the abdomen, the external border of which can be effected without any trouble. After placing inside the entire cartilaginous border, one takes Gosset's special chondrotome, or a simple knife, to cut the part intended for transplantation; in most cases the knife is enough, if one is careful in cutting the cartilage holding with the left hand index. The part intended for grafting is cut only as thick as half of the thickness of the cartilage border in order not to fracture the latter or weaken it too much. Then it receives the shape and dimensions just a little more than that amounting to the loss of the cranial substance. A sheet of sterilized paper has permitted the required design to be made while the first step of the operation is going on. If one piece of cartilage is not sufficient, one takes two or three. These grafts are placed on a piece of gauze and the wound is closed immediately. One takes care to make before a musculo-aponeurotic cover for it.

Then one goes back to the cranium, where the compression has usually stopped the flowing of either blood or fluid. The question is then to place the thinned borders of the cartilage graft between the brain and the internal side of the bone end so as to make them join together as the glass of a watch, the perichondrial surface being placed toward the brain. For the average case of loss of bone substance, one piece of cartilage is usually sufficient; when these are very large, I have had to utilize two and three pieces. With the grafts out of the way, it is sufficient to turn back the skin and stitch together.

The operation is borne well and does not cause shock. In a period of from five to eight days the cranial healing is complete, and that of the hypochondrium follows a few days later. When, about the eighteenth or twentieth day, the patients leave the hospital, their loss of substance is well replaced by a patch which may be a little elastic, but is solid just the same.

Operative Results.—Among twenty-eight cranioplastics performed, I have had neither death nor meningitis. I have had two failures; these were caused by the infection of the flap, the center of which was formed by a scar of a thinness too pronounced as a result of the first operation of craniotomy.

Curative Results.—Clinically speaking, the success was very satisfactory. It must be stated that in no case has the cranioplastic caused new troubles, and it has often suppressed them entirely and in every case brought about improvement in the existing condition. The epileptic crises have been a little modified, but the cephalalgia and dizziness have been often suppressed or at least influenced favorably. The sensitiveness to cold, heat, noise, and above all, that sensation so painful of dizziness which is present in the cases in which large loss of substance occurs, have disappeared entirely. Finally, all those operated on insist on the great satisfaction derived and the sensation of security they feel by knowing that thereafter their "brain is protected."

In the presence of these results, it seems that all those patients presenting a loss of cranial substance of dimensions approaching or exceeding those of a piece of five francs are proper subjects for a cranioplastic operation.

Address of Dr. Ernest W. Hey Groves

LESSONS FROM THE SURGERY OF WAR

Dr. Ernest W. Hey Groves, England, said: I want to speak to you a very few words, not so much about the organization of surgery in the war, but rather about the organization that ought to take place in surgery by reason of the war.

What a remarkable change has taken place since the dark days of 1914, 1915 and 1916. In the first place, it seems to me that foresight and preparedness and organization are the most important lessons—not to wait for the emergency to occur, but rather to prepare for it beforehand.

Then the next point, which has especially impressed itself on the surgeons and those interested in special branches of surgery, is the necessity for specialists.

No subject reduced us to such despair in the early days of the war as fractures. I may equally say that in the latter days of the war perhaps no subject has been more satisfactorily dealt with. That improvement was due, not to the genius of any one man or to the invention of any one apparatus, but simply to the principles of cooperation, continuity and team work.

In summing up I would mention three points: First, the surgical neglect of the well-to-do people. In our country, hospitals were originated by religious orders, and in the present day they are largely kept up as a matter of philanthropy, and these hospitals in our country for the most part are open only to the absolutely poor. I am not saying one word against that, but I fail to see why the possession of a reasonable amount of worldly property should debar well-to-do patients from the advantages of institutional treatment. In our country, if a man can afford to pay for surgical treatment and operation, he goes into a nursing home, or he has his operation done in his own home in a way which would not be tolerated for one single moment in one of the charitable hospitals. Organization, observation, research and that critical looking over of work by other people which is the safeguard of hospital work, is lacking in all the work done for the better class of patients.

My second point is that until the state takes up this question of surgical organization we shall never have an impartial, trustworthy record of surgical statistics. You are aware that many enthusiasts constantly come forward with suggestions for all kinds of claims that a particular operation is an absolute cure; and if one man has some new kink in an operation, a great number of men will go on performing this operation—it may be, even long after the originator has found out its fallacy.

My third point is an argument for state control of surgical organization. Throughout the war we have been tremendously helped by various philanthropic organizations, and I wish to record our great gratitude for the help of these organizations. But at the same time I do wish very seriously to protest against the important work of the treatment of the wounded being left in any way to what I may describe as "haphazard-philanthropy." The serious treatment of the wounded ought to be undertaken by the state from start to finish, and I urge that the encouragement of private philanthropy in that respect is not an advancement but rather keeps matters back.

MINUTES OF THE SECTIONS

SECTION ON PRACTICE OF MEDICINE

Wednesday, June 11—Morning

The section was called to order at 9:15 by the chairman, Dr. Walter L. Bierring, Des Moines, Iowa.

Dr. Bierring read the chairman's address, entitled "Relations of Internists to Military Medicine." No discussion.

Dr. George W. McCaskey, Fort Wayne, Ind., read a paper on "The Basal Metabolism and Alimentary Hyperglycemia Tests of Thyrotoxicosis." Discussed by Drs. John C. Hemmeter, Baltimore; Lewellys F. Barker, Baltimore; Nelson W. Janney, New York, and George W. McCaskey, Fort Wayne, Ind.

Dr. Henry S. Plummer, Rochester, Minn., read a paper on "The Classification of Goiters." Discussed by Drs. Emil Goetsch, Baltimore; Lewellys F. Barker, Baltimore; Henry A. Christian, Boston; George W. McCaskey, Fort Wayne, Ind.; Charles H. Mayo, Rochester, Minn., and Henry S. Plummer, Rochester, Minn.

Dr. James P. O'Hare, Boston, read a paper on "The Clinical, Functional and Pathologic Observations in Some Cases of Chronic Nephritis." Discussed by Drs. Herman Mosenthal, Baltimore; Edward F. Wells, Chicago; Lewis A. Conner, New York; Frank Billings, Chicago; L. D. Bulkley, New York, and James P. O'Hare, Boston.

Dr. Edward J. Wood, Wilmington, N. C., read a paper on "A Note on Tropical Sprue." Discussed by Drs. Douglas Vanderhoof, Richmond, Va.; Joseph H. Pratt, Boston; Walter C. Alvarez, San Francisco; Emanuel Libman, New York; M. L. Graves, Galveston, Texas; Alfred T. Livingston, Jamestown, N. Y., and Edward J. Wood, Wilmington, N. C.

The chairman appointed to serve on the executive committee, for this meeting, Drs. George Blumer, New Haven, Conn., and Charles F. Hoover, Cleveland, in the places of Drs. Roger S. Morris, Cincinnati, and Lawrence Litchfield, Pittsburgh, who were absent.

Dr. David Riesman, Philadelphia, read a paper on "Unusual Tolerance, Especially in Women, to High Arterial Pressure." Discussed by Drs. Joseph H. Pratt, Boston; Henry S. Plummer, Rochester, Minn.; L. F. Bishop, New York; James M. Anders, Philadelphia, and David Riesman, Philadelphia.

Thursday, June 12—Morning

Dr. Charles F. Hoover, Cleveland, read a paper on "The Clinical Study of Pulmonary Excursion." Discussed by Drs. Henry Sewall, Denver; Charles L. Minor, Asheville, N. C., and Charles L. Hoover, Cleveland.

Dr. Ralph Pemberton, Philadelphia, read a paper on "Chronic Arthritis in the Army: Observations Based on a Survey of Four Hundred Cases." Discussed by Drs. E. P. Joslin, Boston; Lewis A. Conner, New York, and Ralph Pemberton, Philadelphia.

Dr. Frank B. Wynn, Indianapolis, read a paper on "The Psychic Factor as an Element in Temperature Disturbance as Shown by Some Observations in the Selective Draft." Discussed by Drs. F. M. Pottenger, Monrovia, Calif.; Emanuel Libman, New York; Henry S. Plummer, Rochester, Minn.; F. B. Turck, New York; George D. Head, Minneapolis; E. F. Wells, Chicago, and Frank B. Wynn, Indianapolis.

Dr. Bertnard Smith, Los Angeles, read a paper on "The Importance of Physical Development in Cases of Effort Syndrome." Discussed by Drs. Eveleth W. Bridgeman, Baltimore; W. S. Thayer, Baltimore, and Bertnard Smith, Los Angeles.

Dr. Willard J. Stone, Toledo, Ohio, read a paper on "Pericarditis as a Complication of Pneumonia Based on Three Hundred Necropsies." Discussed by Drs. Charles S. Williamson, Chicago; Charles F. Hoover, Cleveland; William H. Robey, Jr., Boston; Henry Sewall, Denver, and Willard J. Stone, Toledo, Ohio.

Dr. Charles C. Bass, New Orleans, read a paper on "Effective and Practical Treatment of Malaria to Disinfect Infected Persons and to Prevent Relapse." Discussed by Drs. Charles S. Williamson, Chicago, and Charles C. Bass, New Orleans.

Dr. Thomas McRae and Elmer H. Funk, Philadelphia, presented a paper on "Errors in the Diagnosis of Chronic Pulmonary Tuberculosis." Discussed by Drs. Leo Kessel, New York; John A. Lichty, Pittsburgh; F. M. Pottenger, Monrovia, Calif.; A. G. Shortle, Albuquerque, N. M., and Elmer H. Funk, Philadelphia.

Friday, June 13—Morning

The following officers were elected: chairman, Dr. James S. McLester, Birmingham, Ala.; vice chairman, Dr. Joseph H. Pratt, Boston; secretary, Dr. G. Canby Robinson, St. Louis; delegate, Dr. Roger S. Morris, Cincinnati.

The chairman requested Dr. W. S. Thayer, Baltimore, to preside. After defining the divisions of professional work in war medicine, and commenting on the leadership of a number of American physicians in caring for the expeditionary forces, Dr. Thayer introduced the first speaker.

The following papers were read as a "Symposium on Medicine in the American Expeditionary Forces":

Dr. Maurice C. Pincoffs, Chicago: "The Division: Evacuation and Ambulance."

Dr. George Draper, New York: "The Corps and Army."

These two papers on "Problems at the Front" were discussed by Drs. Homer F. Swift, New York, and W. S. Thayer, Baltimore.

Dr. Joseph A. Capps, Chicago: "The Work of the Group Consultant."

Dr. Joseph Sailer, Philadelphia: "The Work of the Group Consultant."

These two papers on "Problems at the Base" were discussed by Drs. R. T. Woodyat, Chicago; Robert H. Halsey, New York, and William Darrach, New York.

Dr. Richard Dexter, Cleveland: "Immediate Recognition and Evacuation of Gas Cases."

Dr. Alfred E. Cohn, New York: "Later Effects."

Dr. Alwin M. Pappenheimer, Hartsdale, N. Y.: "Pathology."

These three papers on "Poisonous Gases" were discussed by Drs. Maurice C. Pincoffs, Chicago; W. S. Thayer, Baltimore; M. W. Ireland, Washington, D. C., and S. J. Crumbine, Topeka, Kan.

Dr. Homer F. Swift, New York: "Trench Fever."

Dr. Warfield T. Longcope, New York: "Influenza."

These two papers on "Specific Infections" were discussed by Drs. W. S. Thayer, Baltimore; Albert E. Roussel, Philadelphia; R. G. LeConte, Philadelphia; Ernest Zueblin, Cincinnati, and Homer F. Swift, New York.

Dr. Reginald Fitz, New York: "Nephritis in the Soldier." Discussed by Drs. Louis Feid, Jr., Cincinnati; E. P. Joslin, Boston; H. E. Jones, Roanoke, Va.; Homer F. Swift, New York, and Reginald Fitz, New York.

Dr. Marion A. Blankenhorn, Orville, Ohio: "The Treatment of Chest Injuries." Discussed by Drs. W. S. Thayer, Baltimore; Ernest Zueblin, Cincinnati, and Marion A. Blankenhorn, Orville, Ohio.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

Wednesday, June 11—Afternoon

The meeting was called to order at 2:15 by the chairman, Dr. John T. Bottomley, Boston.

Dr. Bottomley read the chairman's address. No discussion.

The following foreign guests occupied seats on the platform: Dr. Antoine Depage, La Panne, Belgium; Dr. Joseph Vande Velde, La Panne, Belgium, and Major Robert Picqué, Bordeaux, France.

The chairman announced that an amendment had been adopted by the House of Delegates whereby the election of officers would occur on Friday afternoon.

Dr. Walter B. Cannon, Boston, read a paper on "Traumatic or Wound Shock."

Dr. Bertram M. Bernheim, Baltimore, read a paper on "Hemorrhage and Transfusion."

These two papers were discussed by Drs. George W. Crile, Cleveland; Oswald H. Robertson, New York; Howard T. Karsner, Cleveland; Major R. Picqué, Bordeaux, France; Richard Lewisohn, New York; Walter B. Cannon, Boston, and Bertram M. Bernheim, Baltimore.

Dr. Dean D. Lewis, Chicago, read a paper on "Debridement."

Dr. Eugene H. Poole, New York, read a paper on "Primary and Secondary Suture."

These two papers were discussed by Drs. Fred W. Bailey, St. Louis; Fenton B. Turck, New York; Donald McRae, Jr., Council Bluffs, Iowa; W. M. Thompson, Chicago; Kellogg Speed, Chicago, and Dean D. Lewis, Chicago.

Dr. Frederick T. Van Buren, Jr., New York, read a paper on "Gas Bacillus Infection."

Dr. George A. Stewart, Baltimore, read a paper on "Sterilization of the Wound."

These two papers were discussed by Dr. Antoine Depage, La Panne, Belgium (translated by Dr. Joseph Vande Velde, La Panne, Belgium), and Fred W. Bancroft, New York.

Thursday, June 12—Morning

The meeting was called to order at 9:15 by the chairman.

Dr. Charles H. Mayo, Rochester, Minn., read a paper on "War Problems." No discussion.

Dr. Charles H. Frazier, Philadelphia, and Samuel Silbert, New York, presented a paper on "Peripheral Nerve Injuries." Discussed by Drs. Martin B. Tinker, Ithaca, N. Y.; W. W. Babcock, Philadelphia; Charles Bagley, Jr., Baltimore; Alfred W. Adson, Rochester, Minn.; Joseph Byrne, New York; Arthur C. Stokes, Omaha, and Charles H. Frazier, Philadelphia.

Dr. W. W. Babcock, Philadelphia, read a paper on "A New Method for the Immediate Sterilization and Closure of Chronic Infected Wounds of Bones and Soft Tissues." Discussed by Drs. Floyd W. McRae, Atlanta, Ga.; Angelo L. Soresi, New York; Albert J. Ochsner, Chicago, and W. W. Babcock, Philadelphia.

Dr. Vilray P. Blair, St. Louis, read a paper on "Maxillofacial Injuries." Discussed by Drs. Robert H. Ivy, Philadelphia; George M. Dorrance, Philadelphia; John B. Roberts, Philadelphia, and Vilray P. Blair, St. Louis.

Friday, June 13—Afternoon

The chairman called the meeting to order at 2:12 o'clock, and announced that he had appointed Drs. Charles H. Peck, New York, and J. Bapst Blake, Boston, on the executive committee in place of Drs. E. Starr Judd, Rochester, Minn., and E. Wyllys Andrews, who were absent.

The following officers were elected: chairman, Dr. Dean D. Lewis, Chicago; vice chairman, Dr. Marvin Clopton, St. Louis; secretary, Dr. George P. Müller, Philadelphia; delegate, Dr. Raymond P. Sullivan, Brooklyn, alternate, E. Denegee Martin, New Orleans; representatives on the board of governors of the American College of Surgeons: Drs. James F. Mitchell, Washington, D. C.; William Darrach, New York, and William E. Lower, Cleveland.

The following papers were read as a symposium on "War Fractures":

Dr. Joseph A. Blake, New York: "War Fractures." Discussed, with lantern slides, by Drs. Morris K. Smith, New York, and Ralph T. Knight, Minneapolis.

Dr. Ernest W. Hey Groves, Bristol, England: "War Fractures."

Dr. John B. Walker, New York: "Statistical Summary of War Fractures."

Dr. Pedro Chutro, Buenos Aires: "Osteomyelitis After Injury."

Dr. Fred H. Albee, New York: "Restoration of Loss of Bone from Gunshot Wounds."

These papers were discussed by Dr. Joseph R. Eastman, Indianapolis, and Colonel Dunham, Australia.

Dr. Vernon C. David, Chicago, read a paper on "War Injuries of Joints." Discussed by Drs. Arthur M. Shipley, Baltimore; Burton J. Lee, New York; Kellogg Speed, Chicago; Joseph A. Blake, New York, and Fred H. Albee, New York.

Dr. Harvey Cushing, Boston, read a paper on "Brain Injuries."

Dr. George W. Crile, Cleveland, read a paper on "Abdominal Injuries."

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

Wednesday, June 11—Morning

The section was called to order at 9:05 by the chairman, Dr. Thomas J. Watkins, Chicago.

Dr. Reuben Peterson was elected delegate to the House of Delegates as substitute for Dr. F. F. Simpson, Pittsburgh, absent in Europe.

Dr. Thomas J. Watkins, Chicago, read the chairman's address, entitled "Progress in Gynecology and Abdominal Surgery." No discussion.

Dr. Samuel M. D. Clark, New Orleans, read a paper on "Analysis of Fifty Cases of Uterine Bleeding from Causes Other than Malignancy or Myoma Treated by Radium."

Dr. John G. Clark, Philadelphia, read a paper on "Treatment of Myoma Uteri with Radium."

These two papers were discussed by Drs. H. C. Bailey, New York; Ernest C. Samuel, New Orleans; Arthur H. Curtis, Chicago; Edward H. Richardson, Baltimore; Roy Lee Brown, New York; John Osborn Polak, Brooklyn; Henry Schmitz, Chicago; Samuel M. D. Clark, New Orleans, and John G. Clark, Philadelphia.

On motion by Dr. J. Riddle Goffe, New York, the recommendation was made to the House of Delegates that guests whose names were presented to the section be elected to honorary membership of the American Medical Association. Seconded and carried.

Dr. Arthur Stein, New York, read a paper on "The Results in Over One Hundred Operations for Uterine Myoma (Operative Versus Roentgen-Ray Treatment)." Discussed by Drs. George E. Pfahler, Philadelphia; J. Riddle Goffe, New York; J. B. DeLee, Chicago; Thomas S. Cullen, Baltimore; Henry Schmitz, Chicago; Peter B. Salatich, New Orleans; Roy Lee Brown, New York; C. N. Cowden, Nashville, Tenn.; Miles F. Porter, Fort Wayne, Ind., and Arthur Stein, New York.

Dr. Chalfant, appointed temporarily Drs. C. Jeff Miller, New Orleans; John Osborn Polak, Brooklyn; Henry P. Newman, San Diego, Calif., on the Executive Committee.

Dr. J. Riddle Goffe offered a resolution, requesting the House of Delegates to approve a committee of the section to take action concerning the international congress of gynecologists and obstetricians, which was referred to the House of Delegates.

Dr. George Gray Ward, Jr., New York, read a paper on "The Teaching Function of the Hospital: With Especial Reference to Gynecology." Discussed by Drs. R. M. Harbin, Rome, Ga.; Isaac S. Stone, Washington, D. C.; John Osborn Polak, Brooklyn; Henry P. Newman, San Diego, Calif.; C. E. Cantrell, Greenville, Texas; J. L. Bubis, Cleveland; J. H. Carstens, Detroit, and George Gray Ward, Jr., New York.

Dr. Emil Ries, Chicago, read a paper on "Alternating, Periodic Swellings of the Ovary." Discussed by Drs. Emil Novak, Baltimore; Alfred Baker Spalding, San Francisco; Peter B. Salatich, New Orleans, and Emil Ries, Chicago.

Thursday, June 12—Morning

The section was called to order at 9 o'clock by Dr. John W. Keefe, Providence, R. I.

Dr. Peter B. Salatich, New Orleans, read a paper on "Uterine Retrodisplacement as a Cause of Reflex Neuroses." Discussed by Drs. E. E. Montgomery, Philadelphia; Charles Ober Kepler, Boston; Emil Novak, Baltimore; Rufus B. Hall, Cincinnati; J. Henry Carstens, Detroit; Isaac S. Stone, Washington, D. C., and Peter B. Salatich, New Orleans.

Dr. J. Henry Carstens, Detroit, read a paper on "The Desirability of Preventing Sterilization in Young Women When Operating for Tuberculous Peritonitis." Discussed by Drs. J. Shelton Horsley, Richmond, Va., and J. Henry Carstens, Detroit.

Dr. Henry P. Newman, San Diego, Calif., read a paper on "The Specialty of Obstetrics." Discussed by Drs. Edward P. Davis, Philadelphia; Gustav E. Zinke, Cincinnati; John F. Moran, Washington, D. C.; H. O. Marcy, Boston; Arthur Stein, New York, and Henry P. Newman, San Diego, Calif.

Dr. Joseph B. DeLee, Chicago, read a paper on "The Newer Methods of Cesarean Section: Their Indications: Results in Forty Cases." Discussed by Drs. James W. Markoe, New York; John Osborn Polak, Brooklyn; Bertha Van Hoosen, Chicago; Gustav E. Zinke, Cincinnati, and Joseph B. DeLee, Chicago.

Dr. Jennings C. Litzenberg, Minneapolis, read a paper on "A Clinical Study of the Treatment of Dysmenorrhea." Discussed by Drs. Emil Novak, Baltimore, and Jennings C. Litzenberg, Minneapolis.

Dr. Frank W. Lynch, San Francisco, read a paper on "Etiology and Treatment of Pernicious Nausea and Vomiting of Pregnancy." Discussed by Drs. Alfred Baker Spalding, San Francisco; Elnora C. Folkmar, Washington, D. C., and Frank W. Lynch, San Francisco.

Dr. Alfred C. Beck, Brooklyn, read a paper on "The Treatment of Abdominal Pregnancy After the Fifth Month." No discussion.

Dr. John Gardiner, Toledo, Ohio, read a paper on "Aspiration and Pressure Treatment of Unopened Mammary Abscess (Puerperal)". Discussed by Drs. Richard C. Norris, Philadelphia; Peter B. Salatich, New Orleans, and John Gardiner, Toledo, Ohio.

Friday, June 13—Morning

The section was called to order at 9 o'clock by the chairman.

The following officers were elected: chairman, Dr. Reuben Peterson, Ann Arbor, Mich.; vice chairman, Dr. Francis Reder, St. Louis; secretary, Dr. Sidney A. Chalfant, Pittsburgh; delegate, Dr. Lewis S. McMurtry, Louisville, Ky.; alternate, Dr. Rufus B. Hall, Cincinnati.

The secretary presented a report of a meeting of section secretaries held in Chicago which presented a number of standing rules for conducting the work of the section. On motion, the report, together with the standing rules, was adopted as a whole.

Dr. Donald Guthrie, Sayre, Pa., read a paper on "Trendelenburg Ether Anesthesia in Pelvic Surgery." Discussed by Drs. John Osborn Polak, Brooklyn; Albert J. Ochsner, Chicago; Donald C. Balfour, Rochester, Minn., and Donald Guthrie, Sayre, Pa.

Dr. Robert E. Farr, Minneapolis, read a paper on "Abdominal Surgery Under Local Anesthesia." Discussed by Drs. Penn-Gaskell Skillern, Jr., Philadelphia; C. N. Cowden, Nashville, Tenn.; J. A. Ruben, Pittsburgh; A. C. Scott, Temple, Texas, and Robert E. Farr, Minneapolis.

Dr. Donald C. Balfour, Rochester, Minn., read a paper on "The Efficiency of Surgical Treatment in the Bleeding Type of Gastric and Duodenal Ulcer." Discussed by Drs. Raymond P. Sullivan, Brooklyn, and Alfred A. Strauss, Chicago.

Dr. J. Shelton Horsley, Richmond, Va., read a paper on "A New Operation for Duodenal and Gastric Ulcers." The discussion of the previous paper was continued in connection with the discussion of Dr. Horsley's paper by Drs. J. B. Blake, Boston; Alfred A. Strauss, Chicago; John T. Bottomley, Boston; George Goodhue, Dayton, Ohio; J. J. Gilbride, Philadelphia; Albert J. Ochsner, Chicago; Miles F. Porter, Fort Wayne, Ind.; W. J. Mayo, Rochester, Minn.; Charles A. L. Reed, Cincinnati; Donald C. Balfour, Rochester, Minn., and J. Shelton Horsley, Richmond, Va.

Dr. John H. Gibbon, Philadelphia, read a paper on "The Treatment of Gunshot Wounds of the Abdomen." Discussed by Dr. Evan W. Meredith, Pittsburgh.

Dr. Roland Hazen, Paris, Ill., read a paper on "Rational Surgery of Visceroptosis." Discussed by Drs. Robert T. Morris, New York; J. J. Gilbride, Philadelphia; J. Shelton Horsley, Richmond, Va.; Charles P. Noble, Philadelphia, and Roland Hazen, Paris, Ill.

SECTION ON OPHTHALMOLOGY

Wednesday, June 11—Morning

The section was called to order at 9:20 by the chairman, Dr. Cassius D. Wescott, Chicago.

Dr. Cassius D. Wescott, Chicago, read the chairman's address.

The following papers were read as a symposium on "Refraction":

Dr. Charles P. Emerson, Indianapolis: "The Ophthalmologist and the Physician."

Dr. Walter L. Pyle, Philadelphia: "Necessary but Often Neglected Refinements in the Examination of Ocular Refraction."

Dr. Edwin J. Gardiner, Chicago: "The Present Status of Refraction Work."

Dr. Samuel Theobald, Baltimore: "The Correction of the Muscular Anomalies of the Eye of Only Less Importance Than That of Their Faults of Refraction."

These four papers were discussed by Drs. Edward Jackson, Denver; Albert E. Bulson, Jr., Fort Wayne, Ind.; Thomas B. Holloway, Philadelphia; Dr. Isaac Hartshorne, New York; Alexander Duane, New York; W. W. Kahn, Detroit; Sidney L. Olsho, Philadelphia; John Green, Jr., St. Louis; William H. Wilder, Chicago; G. C. Savage, Nashville, Tenn.; H. B. Lemere, Omaha; Linn Emerson, Orange, N. J.; Oliver Tydings, Chicago; Dunbar Roy, Atlanta, Ga.; A. E. Davis, New York; Charles P. Emerson, Indianapolis; Walter L. Pyle, Philadelphia; Edwin J. Gardiner, Chicago, and Samuel Theobald, Baltimore.

Wednesday, June 11—Afternoon

The section was called to order at 2 o'clock by the chairman.

There was an exhibition of new instruments and appliances by Drs. David W. Wells, Boston; A. S. Green, San Francisco; John Green, Jr., St. Louis; J. O. McReynolds, Dallas, Texas, and Allen Greenwood, Boston.

Dr. Allen Greenwood, Boston, read a paper on "The Organization and Activities of the Ophthalmic Service in the American Expeditionary Forces." Discussed by Drs. G. E. de Schweinitz, Philadelphia; James Bordley, Jr., Baltimore; E. C. Ellett, Memphis, Tenn.; George S. Derby, Boston; Walter R. Parker, Detroit; Lee Masten Francis, Buffalo; Nelson Miles Black, Milwaukee, and Allen Greenwood, Boston.

Dr. George S. Derby, Boston, read a paper on "The Control of Trachoma Among the Alien Labor Companies of the British and American Expeditionary Forces." Discussed by Drs. Allen Greenwood, Boston, and George S. Derby, Boston.

Dr. F. Park Lewis, Buffalo, read a paper on "Group Study, a Necessity in Ophthalmic Research." Discussed by Drs. Walter R. Parker, Detroit; Alexander Duane, New York; Albert E. Bulson, Jr., Fort Wayne, Ind.; Richard J. Tivnen, Chicago; Oliver Tydings, Chicago; George S. Derby, Boston; G. H. Price, Nashville, Tenn., and F. Park Lewis, Buffalo.

Dr. Edward Jackson, Denver, read a paper on "Daylight Illumination of Interiors." Discussed by Drs. Nelson Miles Black, Milwaukee; W. B. Lancaster, Boston, and Edward Jackson, Denver.

Dr. Robert Blue, Chicago, read a paper on "Family Degeneration of the Macula Lutea." Discussed by Drs. Samuel D. Risley, Philadelphia; William Zentmayer, Philadelphia; Marcus Feingold, New Orleans, and Robert Blue, Chicago.

Thursday, June 12—Morning

The section was called to order by the chairman at 9:05.

The following officers were elected: chairman, Dr. Allen Greenwood, Boston; vice chairman, Dr. Nelson M. Black, Milwaukee; secretary (for three years), Dr. George S. Derby, Boston; delegate, Dr. Lee Masten Francis, Buffalo.

The report of the Committee on Knapp Testimonial Fund was presented by Dr. Bulson.

The report of the Committee on Ophthalmic Examinations was presented by Dr. Edward Jackson, Denver.

On motion duly seconded and carried, preambles and resolutions were adopted authorizing the appointment of a committee from the section to cooperate with similar committees from the American Ophthalmological Society and from the American Academy of Ophthalmology and Oto-Laryngology for the purpose of considering the advisability of arranging for the International Congress of Ophthalmology to be held in the United States.

Drs. Martin Cohen and Isaac Levin, New York, presented a paper on "The Action of Radium on Cataracts." Discussed by Drs. Isaac Levin, New York; Allen Greenwood, Boston; E. L. Jones, Cumberland, Md.; John E. Weeks, New York; F. Park Lewis, Buffalo; S. D. Ridley, Philadelphia; G. C. Savage, Nashville, Tenn.; A. S. Green, San Francsico; Edward Jackson, Denver; S. Lewis Ziegler, Philadelphia, and Martin Cohen, New York.

Action was taken declaring that the Section on Ophthalmology of the American Medical Association recommends that frames with circular lenses be furnished with some device to prevent rotation of the lenses in their frames, a copy to be transmitted to the proper officials of the Senate and House of Representatives at Washington.

Dr. Arthur G. Bennett, Buffalo, read a paper on "Immediate Capsulotomy in the Extraction of Senile Cataract." Discussed by Drs. Harry Woodruff, Joliet, Ill.; F. Park Lewis, Buffalo; Derrick T. Vail, Cincinnati; Edward Jackson, Denver; Walter R. Parker, Detroit, and Arthur G. Bennett, Buffalo.

Dr. S. Lewis Ziegler, Philadelphia, read a paper on "Adventitious Hyaloid Membrane Following Operation for Secondary Cataract." Discussed by Drs. Alexander Duane, New York; George E. de Schweinitz, Philadelphia; William T. Davis, Washington, D. C.; Oliver Tydings, Chicago, and S. Lewis Ziegler, Philadelphia.

Dr. Arnold Knapp, New York, read a paper on "The Autotoxic Factor in Sympathetic Ophthalmia." Discussed by Drs. Louis F. Love, Philadelphia; George Huston Bell, New York, and S. Lewis Ziegler, Philadelphia.

Dr. William H. Wilder, Chicago, read a paper on "Treatment of Symblepharon and Restoration of the Orbital Socket." Discussed by Drs. George E. de Schweinitz, Philadelphia; John E. Weeks, New York; George B. Jobson, Franklin, Pa.; Harry W. Woodruff, Joliet, Ill., and William H. Wilder, Chicago.

Dr. George Huston Bell, New York, read a paper on "The Rôle of Teeth, Tonsils, and Toxemias of the Intestinal Tract in Relation to Diseases of the Eye." Discussed by Drs. Hiram Woods, Baltimore; John E. Weeks, New York; F. Park Lewis, Buffalo; Clarence Arch Veasey, Spokane, Wash.; M. C. Rose, New York; Frederick F. Teal, Lincoln, Neb.; James J. King, New York; H. B. Lemere, Omaha; Oliver Tydings, Chicago; S. Lewis Ziegler, Philadelphia, and George Huston Bell, New York.

Friday, June 13—Morning

The section was called to order by the chairman at 9:05.

Dr. L. Webster Fox, Philadelphia, read a paper on "A New Operation for the Relief of Conical Cornea." Discussed by Drs. Walter B. Lancaster, Boston; Frederick H. Verhoeff, Boston; William Thornwall Davis, Washington, D. C.; A. S. Green, San Francisco; Oscar Wilkinson, Washington, D. C.; Meyer Wiener, St. Louis; W. C. Posey, Philadelphia; S. Lewis Ziegler, Philadelphia, and L. Webster Fox, Philadelphia.

Dr. A. Edward Davis, New York, read a paper on "Uveitis." Discussed by Drs. George E. de Schweinitz, Philadelphia; E. L. Jones, Cumberland, Md., and A. Edward Davis, New York.

The election of a committee on Award of the Knapp Medal was the next order of business. Drs. Edward Jackson, Denver; Samuel D. Risley, Philadelphia, and G. H. Price, Nashville, Tenn., were selected.

It was recommended that three committees be appointed: a committee of three to report to the section on the standardizing of undergraduate instruction in ophthalmology; a committee of three to report a scale of compensation for ocular injuries, and a committee of five to report on the use of various local anesthetics and on their effects on the eye.

Drs. George E. de Schweinitz, Philadelphia, and Meyer Wiener, St. Louis, read a paper on "(1) Cysticercus of the Vitreous; (2) Congenital Multilocular Cysts in Relation with the Retina, and (3) Anterior Lenticonus: Being a Clinical Communication." Discussed by Drs. Frederick H. Verhoeff, Boston; Alexander Duane, New York; Allen Greenwood, Boston; A. E. Davis, New York; S. D. Risley, Philadelphia; George E. de Schweinitz, Philadelphia, and Meyer Wiener, St. Louis.

Dr. John O. McReynolds, Dallas, Texas, read a paper on "Foreign Bodies Within the Eyeball." Discussed by Drs. William M. Sweet, Philadelphia; R. H. T. Mann, Texarkana, Ark.; John Green, Jr., St. Louis; Edward Jackson, Denver; Allen Greenwood, Boston; Lee M. Francis, Buffalo; George S. Derby, Boston; Oliver Tydings, Chicago, and John O. McReynolds, Dallas, Texas.

Dr. John Green, Jr., St. Louis, read a paper on "The Treatment of Dacryocystitis by Curettage." Discussed by Drs. William R. Thompson, Fort Worth, Texas; S. Lewis Ziegler, Philadelphia; William H. Wilder, Chicago, and John Green, Jr., St. Louis.

Dr. John E. Weeks, New York, read a paper on "Personal Observations Regarding the Treatment of Glaucoma." Discussed by Drs. William Campbell Posey, Philadelphia; E. E. Blaauw, Buffalo; L. Webster Fox, Philadelphia; Walter R. Parker, Detroit, and John E. Weeks, New York.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

Wednesday, June 11—Morning

The section was called to order at 9:15 a. m. by the chairman, Dr. Lee W. Dean, Iowa City, Iowa.

Dr. Dean read the chairman's address.

The chairman then asked Dr. Francis P. Emerson, Boston, to present Dr. Fernand Lemaitre, authorized representative of the French Government. Dr. Lemaitre was seated on the platform.

Dr. Albert P. Brubaker, Philadelphia, read a paper on "Physiologic Mechanism of Sneezing and Nasal Hydrorrhea."

The chairman then asked Dr. H. P. Mosher, Boston, to present Sir St. Clair Thomson, London, England, accredited representative of the British Medical Society, and to bring him to the platform.

Dr. John A. Thompson, Cincinnati, read a paper on "Nasal Hydrorrhea."

Dr. Greenfield Sluder, St. Louis, read a paper on "Asthma as a Nasal Reflex."

Dr. Harry L. Pollock, Chicago, read a paper on "Sphenopalatine Ganglion Neurosis."

These papers were discussed by Sir St. Clair Thomson, London, England, and by Drs. Wolf Freudenthal, New York; Emil Mayer, New York; Orville H. Brown, Phoenix, Ariz.; Joseph C. Beck, Chicago; Albert P. Brubaker, Philadelphia; John A. Thompson, Cincinnati; Greenfield Sluder, St. Louis, and Harry L. Pollock; Chicago.

The chairman then presented Dr. Frank Rose of the Royal Medical Society of London.

Dr. Seymour Oppenheimer, New York, read a paper on "Disease of the Nasal Accessory Cavities of Children." Discussed by Drs. Charles Gilmore Kerley, New York; J. McTiernan, New York; Emil Mayer, New York; Sir St. Clair Thomson, London, England; I. W. Voorhees, New York; G. W. McKenzie, Philadelphia; Lee W. Dean, Iowa City, Iowa, and Seymour Oppenheimer, New York.

The section, on motion by Dr. Francis P. Emerson, nominated the following men as Honorary Fellows of the American Medical Association: Sir St. Clair Thomson, Fernand Lemaitre and Frank Rose.

The chairman appointed the following nominating committee: Francis P. Emerson, Greenfield Sluder and Joseph C. Beck.

Thursday, June 12—Morning

The section was called to order at 9:05 by the chairman. The chairman announced that, according to the new ruling of the House of Delegates, the election of officers would occur at the last session.

The chairman read a letter from the Council on Pharmacy and Chemistry, urging that this section appoint a committee to report on the use of local anesthetics in nose and throat work. It was moved by Dr. Emil Mayer that the chairman appoint three members on that committee. Motion seconded and carried.

A motion was made by Dr. Eugene R. Lewis that Dr. Dutton Wright be given two minutes in which to present the question of the education of the deaf child. Seconded and carried.

Dr. Wright was accorded an opportunity to address the section.

Dr. Emil Mayer offered a motion recommending that the section appoint a committee of three to study the early education of the deaf child.

The Committee on Legislation Regulating the Sale of Caustic Lye Products then made the following report:

> The committee appreciates the importance of securing legislation enforcing restrictions on the sale of caustic products intended for home use. "Caution" labels would tend to standardize lye products as sold by the grocer and would afford some protection to consumers.
>
> We have made efforts to have this matter formulated for legislative action and have been informed that it was under consideration.
>
> It will be necessary to present case reports of lye poisoning in order to impress the importance of legislation protecting the domestic consumer, and this request will be made to the profession at the proper time.
>
> Thomas Hubbard,
> Chevalier Jackson,
> Hubert Arrowsmith,
> Committee.

A motion was made by Dr. J. F. Barnhill, Indianapolis, that the report be accepted and the committee continued. Motion seconded and carried.

The Committee on Necrology then made its report.

A motion was made by Dr. Eugene Lewis that the report be received and the committee continued, the section receiving the report by standing vote. Carried.

Dr. Meyers, St. Louis, presented an improved lever for pulling the tonsil over the eminence of the inferior maxillary, using a Sluder handle on the Beck instrument.

Dr. Chevalier Jackson, Philadelphia, read a paper on "Arachidic Bronchitis." Discussed by Drs. Edwin E. Graham, Philadelphia; Thomas Hubbard, Toledo, Ohio; J. W. Murphy, Cincinnati; H. P. Mosher, Boston; Fenton B. Turck, New York; Sir St. Clair Thomson, London- England, and Chevalier Jackson, Philadelphia.

Dr. Henry L. Lynah, New York, read a paper on "Influenza Croup." This paper was discussed by Drs. Jesse Bullowa, Charles W. Richardson, Washington, D. C.; Samuel M. Iglauer, Cincinnati; Thomas Hubbard, Toledo, Ohio, and Henry L. Lynah, New York.

Dr. Joseph H. Bryan, Washington, D. C., and Dr. C. Norman Howard, Warsaw, Ind., presented a paper on "The Relation of the Ear and Accessory Sinuses to Influenza During the Recent Epidemic, as Observed at the Walter Reed Hospital, Takoma Park, D. C." Discussed by Drs. Weider, Philadelphia; John B. Potts, Omaha; M. F. Arbuckle, St. Louis; J. M. McTiernan, New York; B. Alexander Randall, Philadelphia; Sir St. Clair Thomson, London, England, and Joseph H. Bryan, Washington, D. C.

Dr. Charles W. Richardson, Washington, D. C., read a paper on "Organization of the Section of Defects of Hearing and Speech, Division of Physical Reconstruction, Office of the Surgeon-General, U. S. Army." Discussed by Drs. John M. Ingersoll, Cleveland; H. P. Mosher, Boston; Elmer E. Kenyon, Chicago, and Charles W. Richardson, Washington, D. C.

Dr. Thomas J. Harris, New York, read a paper on "The Present Status of Otolaryngology in America, with a Plea for a Standardized Course of Instruction." Discussed by John Bowman, director, American College of Surgeons, and Drs. H. P. Mosher, Boston; D. J. Gibbs-Wishart, Toronto, Canada; Coakley, New York; Joseph C. Beck, Chicago; Sir St. Clair Thomson, London, England, and Thomas J. Harris, New York.

Dr. Greenfield Sluder exhibited a guillotine for the removal of tonsils—an instrument presented last year. A lever gives added power, and the blade has been bent and put into a sleeve.

FRIDAY, JUNE 13—MORNING

The section was called to order at 9 o'clock by the chairman.

Following some announcements, the secretary read the standing rules agreed on at a conference of the secretaries of the sections and reported to the House of Delegates by the Council on Scientific Assembly (see this report for these rules). On motion duly seconded and carried, these standing rules were adopted.

The chairman appointed as the Committee on the Use of Local Anesthetics in Nose and Throat Work, Emil Mayer, New York; Ross W. Skillern, Philadelphia, and Robert Sonnenschein, Chicago.

Dr. Thomas J. Harris, New York, moved that the Committee on the Education of the Deaf Child be made a permanent committee to consider the question of the education of the deaf child. Seconded and carried.

Dr. H. P. Mosher then presented the report of the Committee on Graduate and Undergraduate Teaching in Laryngology.

A motion was made by Dr. Thomas J. Harris that the report be received. Seconded and carried.

A motion was made by Dr. Thomas J. Harris that the recommendations of the committee presenting the above report be approved. This motion was seconded; Dr. James Lawton Hiers, Savannah, Georgia, spoke to the motion, and it carried.

The chairman appointed as the Committee on the Education of the Deaf Child, Drs. Charles W. Richardson, Washington, D. C.; Elmer E. Kenyon, Chicago, and M. A. Goldstein, St. Louis.

The following officers were elected: Chairman, Joseph C. Beck, Chicago; vice chairman, George M. Coates, Philadelphia; secretary (three years), William B. Chamberlin, Cleveland; delegate, John F. Barnhill, Indianapolis; alternate, Thomas Darmody, Denver.

Dr. Wells P. Eagleton, Newark, N. J., read a paper on "Cerebellar Abscess." Discussed by Dr. George F. Cott, Buffalo; Prof. Fernand Lemaitre, France; Drs. Ewing W. Day, Pittsburgh; Edward J. Bernstein, Detroit; Joseph C. Beck, Chicago, and Wells P. Eagleton, Newark, N. J.

Dr. John B. Potts, Omaha, read a paper on "Mastoidectomy: Postoperative Treatment by Carrel-Dakin Solution and Results." Discussed by Drs. Ewing W. Day, Pittsburgh; Arthur C. Stokes, Omaha; Francis P. Emerson, Boston; C. J. Swan, Evanston, Ill.; Wendell C. Phillips, New York; Edward J. Bernstein, Detroit, and John B. Potts, Omaha.

Sir St. Clair Thomson, London, England, read a paper on "Tranquil Tracheotomy by Injecting Cocain Within the Windpipe." Discussed by Drs. Frank C. Rose, London, England, and Frederick R. Waldron, Ann Arbor, Mich.; Prof. Fernand Lemaitre, and Drs. Otto Glogau, New York; M. F. Arbuckle, St. Louis, and Sir St. Clair Thomson, London, England.

Dr. Ross H. Skillern, Philadelphia, read a paper on "Some Experiences of a Commanding Officer of a Base Hospital in France." Discussed by Dr. George M. Coates, Philadelphia.

The chairman then introduced the newly elected chairman, Dr. Joseph C. Beck, who took the chair.

Dr. Francis P. Emerson moved a rising vote of thanks to Sir St. Clair Thomson, Prof. Fernand Lemaitre, and Dr. Frank C. Rose, not only for their presence, but for their valued contributions to the program, and expressed the hope that this section may be favored with their presence in the future. Seconded and carried.

Dr. Charles W. Richardson moved that the section express its gratitude to the retiring chairman, Dr. Lee W. Dean, for the efficient manner in which he presided during the sessions and for the particularly successful issue which was brought about by his management of the section. Seconded and carried.

SECTION ON DISEASES OF CHILDREN

WEDNESDAY, JUNE 11—AFTERNOON

The meeting was called to order at 2:30 by the chairman, Dr. Franklin P. Gengenbach, Denver.

Dr. Franklin P. Gengenbach read the chairman's address entitled "Our Section in the War Work."

The following resolution was adopted:

WHEREAS, Investigation by a committee of the Section on Diseases of Children of the American Medical Association shows that there is a great deal of confusion in the operation of the federal regulations concerning infant and child welfare in this country; and

WHEREAS, It further appears that this unfortunate condition is largely due to the lack of cooperation for one reason or another between the medical profession and those governmental agencies charged with this work; and

WHEREAS, It also appears that the control of the medical aspect of this vital matter is being assumed by lay people to the exclusion of the medical profession, therefore, by and for the Section on Diseases of Children of the American Medical Association, be it

Resolved, That it is earnestly requested that the Council on Health and Public Instruction give this matter serious attention, and that it shall confer with a committee appointed from the Section on Diseases of Children to consider carefully the matter and to report at the next annual meeting. (Not submitted to the House of Delegates.)

Dr. James D. Love, Jacksonville, Fla., spoke on the arrangement of the section meetings. Dr. Emanuel C. Fleischner, San Francisco, replied to Dr. Love's suggestions.

Dr. Anna E. Rude, Washington, D. C., read a paper on "The 'Victory' of Children's Year." Discussed by Sir Arthur Newsholme, England.

Dr. Frank C. Neff, Kansas City, Mo., read a paper on "The Pediatrician at Home During the War." Discussed by Drs. John M. Dodson, Chicago; Percival J. Eaton, Pittsburgh; S. M. Hamill, Philadelphia; Ethel B. Davis, Chicago; H. F. Helmholz, Chicago; Anna E. Rude, Washington, D. C., and Frank C. Neff, Kansas City, Mo.

Dr. Clifford G. Grulee, Chicago, read a paper on "The Work of the Children's Bureau of the American Red Cross in Lyons, France." Discussed by Dr. Frank H. Lamb, Cincinnati.

Dr. William McKim Marriott, St. Louis, read a paper on "The Artificial Feeding of Athreptic Infants." Discussed by Drs. Fritz Talbot, Boston; Alfred F. Hess, New York; J. C. Griffith, Philadelphia; C. G. Kerley, New York; J. H. Kerley, New York; H. F. Helmholz, Chicago; Louis Hill, Boston; Thomas C. McCleave, Oakland, Calif., and William McKim Marriott, St. Louis.

Dr. Alfred F. Hess, New York, read a paper on "The Deleterious Effect of Alkalinization of Infants' Food." Discussed by Drs. Harry Lowenburg, Philadelphia; Julius H. Hess, Chicago; C. G. Kerley, New York; J. C. Griffith, Philadelphia; St. George T. Grinnan, Richmond, Va.; Joseph Grover, Boston; Louis Hill, Boston; Ethel B. Davis, Chicago; Emanuel C. Fleischner, San Francisco; F. C. Neff, Kansas City, Mo., and Alfred F. Hess, New York.

A motion made by Dr. J. C. Griffith, Philadelphia, that all reference by name to any proprietary food as advertised to the laity be eliminated from the record, was discussed by Drs. A. F. Hess, New York; J. C. Griffith, Philadelphia, and Harry Lowenburg Philadelphia, and carried.

THURSDAY, JUNE 12—MORNING

The meeting was called to order at 9:15 by the chairman.

A motion was passed that the resolution passed at the last session be returned to the committee.

Dr. Walter R. Ramsey, St. Paul, spoke on his work in France. Discussed by Dr. Julius P. Sedgwick, Minneapolis.

Dr. John A. Foote, Washington, D. C., read a paper on "Hemangio-Endotheliosarcoma of the Liver." No discussion.

Drs. William Herrick, New York, and Arthur M. Dannenberg, Philadelphia, presented a paper on "Observations on the Spinal Fluid of Acute Disease."

Dr. Abraham Levinson, Chicago, read a paper on "Quantitative and Qualitative Changes in the Cerebrospinal Fluid and Their Significance."

These two papers were discussed by Drs. Charles G. Kerley, New York; Isaac A. Abt, Chicago; Walter R. Ramsey, St. Paul; Alfred P. Hess, New York; H. L. F. Locke, Hartford, Conn.; Herman Schwartz, New York; F. B.

Talbot, Boston; W. R. Sissner, Boston; W. L. Moss, New Haven, Conn.; Arthur M. Dannenberg, Philadelphia; William W. Herrick, New York, and Abraham Levinson, Chicago.

Dr. Rowland G. Freeman, New York, read a paper on "Pneumonia in Infancy and Childhood Without Physical Signs." Discussed by Drs. Walter R. Ramsey, St. Paul; Ernest Zueblin, Cincinnati; Charles G. Kerley, New York; Laurence R. DeBuys, New Orleans; J. S. Wall, Washington, D. C.; G. R. Pisek, New York; Louis Fischer, New York, and Rowland G. Freeman, New York.

Dr. Julius H. Hess, Chicago, read a paper on "A Comparative Study of the Early and Late Secondary Complications of Influenza and Influenzal Pneumonia as Seen in the Army, with Those of Infants and Children in Civil Practice."

Drs. Herman Schwartz and Harry Wessler, New York, presented a paper on "Abscess of the Lung in Children."

These two papers were discussed by Drs. Thomas C. McCleave, Oakland, Calif.; William Weston, Columbia, S. C.; H. M. McClanahan, Omaha; Ernest Zueblin, Cincinnati; Ellis Bonime, New York; Langley Porter, San Francisco; Louis Fischer, New York; Julius H. Hess, Chicago, and Herman Schwartz, New York.

Friday, June 13—Afternoon

The meeting was called to order at 2 o'clock by the chairman.

Dr. Richard Cole Newton, Montclair, N. J., read a paper on "Some Clinical Experience in the Treatment of Children with Tuberculin." Discussed by Drs. Francis M. Pottenger, Los Angeles; Ellis Bonime, New York; Fritz B. Talbot, Boston; Abraham Levinson, Chicago, and Richard Cole Newton, Montclair, N. J.

Dr. Emanuel C. Fleischner, San Francisco, read the report of the Advisory War Committee of the Section on Diseases of Children. Discussed by Drs. Thomas C. McCleave, Oakland, Calif.; Isaac A. Abt, Chicago, and Laurence R. De Buys, New Orleans. A motion was passed that the committee be continued.

The following officers were elected: chairman, Dr. Fritz B. Talbot, Boston; vice chairman, Dr. Julius H. Hess, Chicago; secretary, Dr. Emanuel C. Fleischner, San Francisco (reelected), and delegate, Dr. Isaac A. Abt.

Dr. Charles Hendee Smith, New York, read a paper on "Recent Development in Outpatient Work." Discussed by Drs. W. L. Moss, New Haven, Conn.; Isaac A. Abt, Chicago; Harry Lowenberg, Philadelphia; Langley Porter, San Francisco, and Dr. Charles Hendee Smith, New York.

Dr. Langley Porter, San Francisco, read a paper on "Retrospect of Fifteen Years' Experience in the Treatment of Hypertrophic Pyloric Obstruction in Infants." Discussed by Drs. H. F. Helmholz, Chicago; Frank C. Neff, Kansas City, Mo.; Harry Lowenberg, Philadelphia; Laurence R. De Buys, New Orleans, and Langley Porter, San Francisco.

Dr. Henry D. Chapin, New York, read a paper on "Chemical Examination of the Blood of Children." Discussed by Dr. Charles G. Kerley, New York.

Dr. Louis Fischer, New York, read a paper on "The Abuse of Cathartics and Laxatives in Infancy and Childhood." Discussed by Drs. W. L. Moss, New Haven, Conn.; H. L. F. Locke, Hartford, Conn.; Laurence R. De Buys, New Orleans; Richard Cole Newton, Montclair, N. J.; Lewis W. Elias, Asheville, N. C.; F. H. Allen, Holyoke, Mass.; Julius H. Hess, Chicago; Walter R. Ramsey, St. Paul, and J. M. Miller, Atlantic City, N. J.

Dr. Fritz B. Talbot, Boston, read a paper on "The Analysis of Human Milk: The Technic of Obtaining Samples and the Interpretation of Results." Discussed by Drs. John Foote, Washington, D. C.; James D. Love, Jacksonville, Fla., and Fritz B. Talbot, Boston.

Dr. E. Bosworth McCready, Pittsburgh, read a paper on "The Nervous Child and His Management." Discussed by Drs. Percival J. Eaton, Pittsburgh; Richard Cole Newton, Montclair, N. J.; W. L. Moss, New Haven, Conn.; Harold B. Wood, Providence, R. I., and E. Bosworth McCready, Pittsburgh.

Drs. Laurence R. De Buys, Maude Loeber and Foster M. Johns, New Orleans, presented a paper on "A Study in a Foundling Institution to Determine the Incidence of Congenital Syphilis." Discussed by Drs. Harold B. Wood, Providence, R. I.; Walter R. Ramsey, St. Paul; J. McKey, Philadelphia, and Laurence R. De Buys, New Orleans.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

Wednesday, June 11—Afternoon

The meeting was called to order at 2 p. m. by the chairman, Dr. W. A. Bastedo, New York. In the absence of the secretary, Dr. Cary Eggleston, New York, because of his having met the week before with a serious accident, Dr. R. A. Hatcher, New York, was elected secretary pro tem.

Dr. Bastedo read the Chairman's address, entitled "Suggestions for an Ideal Course in Therapeutics."

Dr. Lester J. Unger, New York, read a paper on "Therapeutic Aspect of Blood Transfusion." Discussed by Drs. E. W. Peterson, New York; Frank W. Hartman, Washington, D. C.; Lester Neuman, Washington, D. C., and Lester J. Unger, New York.

The chairman then introduced Dr. P. Nolf, Brussels, Belgium, who read a paper on "Therapeutic Observations in Bacillary Dysentery." Discussed by Drs. Solomon Solis Cohen, Philadelphia, and P. Nolf, Brussels, Belgium.

Dr. Charles C. Lieb, New York, read a paper on "The Action of Anthracene Cathartics on the Isolated Uterus."

Dr. William DeB. MacNider, Chapel Hill, N. C., read a paper on "A Study of Acute Mercuric Chlorid Intoxication in Normal and in Naturally Nephropathic Dogs." Discussed by Drs. Jacob Rosenbloom, Pittsburgh; Ernest Zueblin, Cincinnati, and William DeB. MacNider, Chapel Hill, N. C.

Thursday, June 12—Morning

The meeting was called to order by the chairman at 9 a. m.

The following officers were elected: chairman, George W. McCoy, Washington, D. C.; vice chairman, Leonard G. Rountree, Minneapolis; secretary, Cary Eggleston, New York (continued); delegate, W. A. Bastedo, New York.

The chairman presented a communication from the U. S. Public Health Service calling attention to a bill regulating vivisection, which was introduced in Congress June 2, and appointed a committee consisting of Drs. G. W. McCoy, Washington, D. C.; A. D. Hirschfelder, Minneapolis, and Robert A. Cooke, New York, to consider the bill and to present a recommendation for action by the section.

Dr. Lambert Ott, Philadelphia, read a paper on "Forty Years' Observation Among Beer, Wine and Whisky Drinkers." Discussed by Drs. Charles A. Rosewater, Newark, N. J.; Solomon Solis Cohen, Philadelphia, and Lambert Ott, Philadelphia.

Dr. Orville H. Brown, Phoenix, Ariz., read a paper on "The Principles of the Treatment of Asthma." Discussed by Drs. S. A. Knopf, New York, and Solomon Solis Cohen, Philadelphia.

Dr. Robert A. Cooke, New York, read a paper on "Allergy in Drug Idiosyncrasy." Discussed by Drs. Lambert Ott, Philadelphia, and Robert A. Cooke, New York.

Dr. Henry Rawle Geyelin, New York, read a paper on "Results in the Modern Treatment of Diabetes." Discussed by Drs. Alfred Stengel, Philadelphia; Jacob Rosenbloom, Pittsburgh; Philip S. Roy, Washington, D. C.; H. O. Mosenthal, New York; E. P. Joslin, Boston; L. F. Kebler, Washington, D. C.; L. G. Heyn, Cincinnati, and C. M. Grigsby, Dallas, Texas.

Dr. R. A. Hatcher, New York, read a paper on "A Further Contribution to the Pharmacology of the Local Anesthetics." Discussed by Dr. David I. Macht, Baltimore.

Dr. David I. Macht, Baltimore, read a paper on "A Therapeutic Study of Benzyl Benzoate: Pharmacologic and Clinical." Discussed by Drs. Douglas Vanderhoof, Richmond, Va.; W. A. Bastedo, New York, and David I. Macht, Baltimore.

Friday, June 13—Afternoon

A joint meeting was held with the Sections on Pathology and Physiology and Preventive Medicine and Public Health.

The meeting was called to order at 2 p. m. by Dr. W. A. Bastedo, New York, chairman of the Section on Pharmacology and Therapeutics.

The following papers were read as a symposium on "Influenza":

Dr. Milton J. Rosenau, Boston: "Experiments on Volunteers to Determine the Mode of Spread of Influenza."

Dr. Wade H. Frost, Washington, D. C.: "Epidemiology of Influenza."

Dr. William H. Park, New York: "The Bacteriology of Influenza and Its Complications."

Dr. William G. MacCallum, Baltimore: "The Pathology of Influenza."

These four papers were discussed by Drs. Augustus Wadsworth, Albany, N. Y.; Anna W. Williams, New York; Edwin R. LeCount, Chicago; Henry Albert, Iowa City, Iowa; Alexander Lambert, New York, and Harold B. Wood, Providence, R. I.

Dr. C. D. Selby, Toledo, Ohio, proposed a resolution urging Congress to appropriate $1,500,000 for the investigation of influenza, this sum to be available to July 1, 1922. This resolution was seconded and carried.

(Not submitted to the House of Delegates.)

The symposium on "Influenza" was resumed:

Dr. Lewis A. Conner, New York: "The Symptoms and Complications of Influenza."

Dr. Edward C. Rosenow, Rochester, Minn.: "Further Studies on Prophylactic Inoculation in Influenza and Pneumonia."

Dr. George W. McCoy, Washington, D. C.: "Present Status of Prophylactic Vaccination Against Influenza."

Dr. Henry F. Stoll, Hartford, Conn.: "Value of Convalescent Blood and Serums in the Treatment of Influenzal Pneumonia."

Dr. James B. Herrick, Chicago: "The Treatment of Influenza by Means Other Than Vaccine and Serums."

These five papers were discussed by Drs. Frank W. Hartman, U. S. Navy; Solomon Solis Cohen, Philadelphia; H. I. Goldstein, Camden, N. J.; Frederick T. Lord, Boston; Albert E. Roussel, Philadelphia; Will Walter, Chicago; M. K. Wylder, Albuquerque, N. M.; William C. Woodward, Boston; C. C. Browning, Los Angeles; H. H. Koons, Los Angeles; W. A. Bastedo, New York; George W. McCoy, Washington, D. C.; Edward C. Rosenow, Rochester, Minn., and James B. Herrick, Chicago.

SECTION ON PATHOLOGY AND PHYSIOLOGY

Wednesday, June 11—Afternoon

The section was called to order at 2:15 by the chairman, Dr. Francis Carter Wood, New York.

Dr. Francis Carter Wood, New York, read the chairman's address, entitled "The Relation of Pathology to Practice."

Dr. Frederic Lee, New York, read a paper on "The Human Machine in the Factory." Discussed by Drs. F. P. Gay, Berkeley, Calif.; Eliza M. Mosher, Brooklyn; E. R. LeCount, Chicago; John Bryant, Boston, and Frederic Lee, New York.

Dr. Louis I. Harris, New York, read a paper on "Clinical Types of Occupational Diseases and the Study of Methods for Their Prevention." Discussed by Dr. Frederic Lee, New York.

Dr. B. H. Ransom, Washington, D. C., read a paper on "A Newly Recognized Cause of Pulmonary Disease—Ascaris Lumbricoides." Discussed by Drs. Theodore Zbinden, Toledo, Ohio; Henry Albert, Iowa City, Iowa; C. C. Bass, New Orleans, and B. H. Ransom, Washington, D. C.

Dr. Kenneth M. Lynch, Charleston, S. C., read a paper on "The Periodicity of Microfilaria." No discussion.

Dr. Sarah R. Kelman, Iowa City, Iowa, read a paper on "Experimental Emphysema." Discussed by Drs. J. G. M. Bullowa, New York; Baldwin H. Lucke, Philadelphia; Meyer A. Rabinovitz, Brooklyn; Henry Albert, Iowa City, Iowa; Robert A. Keilty, Danville, Pa.; Jesse W. Smith, Charleston, S. C.; E. C. Rosenow, Rochester, Minn.; A. A. Epstein, New York, and Sarah R. Kelman, Iowa City, Iowa.

The officers and members of the section approved the following list of applications for associate fellowship in the American Medical Association: E. Thompson Bell, Minneapolis; Ross G. Harrison, New Haven, Conn.; Frank W. Lacy, Las Animas, Colo.; Frederic S. Lee, New York; Davenport Hooker, New Haven, Conn.; Milton C. Winternitz, New Haven, Conn.; Leila De Ette Jackson, Chicago; William H. Welker, Chicago; Joseph Erlanger, St. Louis; Roy Graham Hoskins, Washington, D. C.; W. C. A. MacKinlay, New Haven, Conn., and Valerian Parker, Hartford.

It was moved, seconded and carried that the delegates representing the medical profession of the countries allied with the United States in the world war and the other invited guests from foreign countries be nominated for honorary fellowship.

Thursday, June 12—Morning

The meeting was called to order at 9:30 by the chairman.

Dr. Eli K. Marshall, Jr., Baltimore, read a paper on "Mustard Gas."

Dr. Frank P. Underhill, New Haven, Conn., read a paper on "The Physiology and Experimental Treatment of Acute Poisoning with the Lethal War Gases."

Dr. Milton C. Winternitz, New Haven, Conn., read a paper on "Anatomic Changes in the Respiratory Tract Initiated by Irritating Gases."

These three papers were discussed by Drs. A. M. Puppenheimer, New York; E. R. LeCount, Chicago; W. M. L. Coplin, Philadelphia; H. E. Robertson, Minneapolis; Francis C. Wood, New York; Eli K. Marshall, Jr., Baltimore, and Frank P. Underhill, New Haven, Conn.

Dr. Frank C. Mann and Dr. K. Kawamura, Rochester, Minn., presented a paper on "Duodenectomy: A Preliminary Report." Discussed by Drs. W. C. MacCarty, Rochester, Minn.; W. M. L. Coplin, Philadelphia; Francis Carter Wood, New York, and Dr. Frank C. Mann, Rochester.

Drs. Howard T. Karsner, L. Rothschild and E. C. Crump, Cleveland, presented a paper on "Clinical Diagnosis as Compared with Necropsy Findings in Six Hundred Cases." Discussed by Drs. F. C. Wood, New York; W. C. MacCarty, Rochester, Minn.; E. R. LeCount, Chicago; Henry Albert, Iowa City; W. M. L. Coplin, Philadelphia; H. E. Robertson, Minneapolis, and H. T. Karsner.

The following officers were elected: chairman, Dr. Howard T. Karsner, Cleveland; secretary, Dr. J. J. Moore, Chicago (held over from present year); delegate, Dr. E. R. LeCount, Chicago; alternate, Dr. Henry Albert, Iowa City, Iowa.

Friday, June 13—Afternoon

A joint meeting was held with the Sections on Pharmacology and Therapeutics, and Preventive Medicine and Public Health.

SECTION ON STOMATOLOGY

Wednesday, June 11—Morning

The meeing was called to order by the chairman, Dr. Eugene S. Talbot, Chicago.

Dr. Thomas L. Gilmer, Chicago, was appointed to act as vice chairman, in the absence of Dr. Lyons.

Dr. Eugene S. Talbot read the chairman's address, reviewing the section work since its organization. Discussed by Drs. T. L. Gilmer, Chicago; G. V. I. Brown, Milwaukee; M. I. Schamberg, New York; E. A. Bogue, New York, Frederick B. Moorehead, Chicago; W. C. Fisher, New York; Arthur D. Black, Chicago; Charles R. Turner, Philadelphia; Arthur Zentler, New York, and E. S. Talbot, Chicago.

Frederick B. Moorehead, Chicago, read a paper on "Macrocheilia, with Report of Two Cases." Discussed by Drs. Vilray P. Blair, St. Louis; M. I. Schamberg, New York, and Thomas L. Gilmer, Chicago.

Dr. Charles R. Turner, Philadelphia, read a paper on "Teaching the Principles of Maxillofacial Surgery in a Civilian School."

Dr. G. V. I. Brown, Milwaukee, read a paper on "Teaching the Principles of Maxillofacial Surgery in a Military School."

Dr. Rea P. McGee, Denver, read a paper on "The Maxillofacial Surgeon in the Front Line Hospital."

Dr. Ivan Smith, Mishawaka, Ind., read a paper on the "Experience of a Dental Surgeon in a Base Hospital in the Advanced Area."

A committee, consisting of Drs. M. I. Schamberg, New York, chairman; Frederick B. Moorehead, Chicago, and Vilray P. Blair, St. Louis, was appointed to consider the suggestions contained in the chairman's address.

The chairman appointed as a nominating committee: Drs. Thomas L. Gilmer, Chicago; G. V. I. Brown, Milwaukee, and Frederick B. Moorehead, Chicago.

Thursday, June 12—Morning

The meeting was called to order by the chairman.

The secretary, Dr. Arthur D. Black, Chicago, moved that Major Fernand Lemaitre of Paris be nominated to the House of Delegates for Honorary Fellowship in the Association. Seconded and carried.

Dr. Frederick B. Noyes, Chicago, reported that the executive committee had reported favorably on the applications for membership of Drs. C. R. Turner, Philadelphia; B. E. Buell, Chief, Dental Department, U. S. Public Health Service; S. L. Silverman, Atlanta, Ga.; H. C. Hopkins, Washington, D. C., and J. D. Milliken, San Francisco.

The motion was made, seconded and carried that those named be approved for Associate Fellowship.

Dr. George M. Dorrance, Philadelphia, read a paper on "Observations of the Work at Queens' Hospital in England."

Drs. Robert H. Ivy, Milwaukee, and Joseph D. Eby, Washington, D. C., presented a paper on "Reconstruction Work in War Injuries of the Jaws."

Dr. Stewart Ruggles, Portsmouth, Ohio, read a paper on "Experience of a Dental Surgeon in a Base Hospital in a Base Section."

Dr. George W. Schaeffer, Columbus, Ohio, read a paper on "Experience of an Area Consultant in the Zone of the Advance."

Dr. Arthur D. Black, Chicago, introduced Major Fernand Lemaitre of Paris, who expressed his pleasure at being present.

Dr. Henry S. Dunning, New York, read a paper on "Osteoperiosteal Bone Grafts of the Mandible as Performed by the French."

Major Fernand Lemaitre, Paris, addressed the section, using illustrative roentgenograms.

Dr. Herbert A. Potts, Chicago, read a paper on "Experience of an Area Consultant in the Intermediate Section."

Friday, June 13—Morning

The section was called to order by the chairman at 9:45. The following officers were elected: chairman, Dr. Vilray P. Blair, St. Louis; vice chairman, Dr. Henry S. Dunning, New York; secretary, Dr. Arthur D. Black, Chicago; delegate, Dr. William C. Fisher, New York.

Dr. Frank J. Tainter, St. Charles, Mo., read a paper on "Bone Grafting in Jaw Cases."

Drs. Daniel H. Macauly, Jr., and Ernest P. Dameron, Cape May, presented a paper on "Infected Fractures of the Mandible.

Dr. V. H. Kazanjian, Boston, read a paper on "Prosthetic Appliances in Relation to the Surgical Treatment of Wounds of the Face and Jaws."

These three papers were discussed by Drs. Vilray P. Blair, St. Louis; Robert H. Ivy, Milwaukee; C. Waldron, Military Hospital, Ste. Anne de Bellevue, Quebec, Canada, and Fred H. Albee, New York.

An expression of thanks to the medical profession for the opportunity which was offered the dental profession to help out in the European war was made by Dr. Stewart Ruggles, Portsmouth, Ohio.

SECTION ON NERVOUS AND MENTAL DISEASES

Wednesday, June 11—Afternoon

The meeting was called to order at 2 o'clock by the chairman, Dr. Archibald Church, Chicago.

Dr. Archibald Church, Chicago, read the chairman's address, entitled "The Pathology of Cervical Ribs."

The chairman appointed the following members to act as a nominating committee: Drs. Sanger Brown, Chicago; Walter Timme, New York, and W. A. Jones, Minneapolis.

In the absence of two members of the executive committee made up of Drs. George A. Moleen, Denver, Bernard Sachs, New York, and C. Eugene Riggs, St. Paul, the chairman named Drs. T. H. Weisenburg, Philadelphia, and Hugh T. Patrick, Chicago, to act for Drs. Sachs and Riggs.

Dr. Joseph Byrne, New York, read a paper on "The Mechanism of Referred Pain, Hyperalgesia and Alcoholic Injections for the Relief of Neuralgia, with Suggestions for the Surgical Treatment of Injured Nerves." Discussed by Dr. Tom A. Williams, Washington, D. C.

Dr. Walter Timme, New York, read a paper on "A New Polyglandular Compensatory Syndrome." Discussed by Drs. Tom A. Williams, Washington, D. C., and Albert E. Sterne, Indianapolis.

Dr. Theodore H. Weisenburg, Philadelphia, read a paper on "Treatment of War Neurosis."

Dr. Tom A. Williams, Washington, D. C., read a paper on "The Management of War Hysteria."

These two papers were discussed by Drs. Robert McGregor, Saginaw, Mich.; Charles A. Rosewater, Newark, N. J., and Lewis J. Pollock, Chicago.

Dr. Edward E. Mayer, Pittsburgh, read a paper on "The Psychopathology of Amnesia." Discussed by Drs. Joseph Byrne, New York; H. D. Singer, Kankakee, Ill.; W. A. Jones, Minneapolis; Albert E. Sterne, Indianapolis, and Tom A. Williams, Washington, D. C.

Thursday, June 12—Morning

The following officers were elected: chairman, Dr. Elmer E. Southard, Boston; vice chairman, Dr. Arthur S. Hamilton, Minneapolis; secretary, Dr. Charles W. Hitchcock, Detroit; delegate, Dr. Hugh T. Patrick, Chicago.

Dr. Hugh T. Patrick read the following resolution which was unanimously adopted:

> Whereas, At the last session of the American Medical Association, the Section on Nervous and Mental Diseases petitioned the Trustees of the Association to establish a journal devoted to nervous and mental diseases and unanimously passed a resolution endorsing the plan; and
>
> Whereas, The Trustees thereafter did establish the *Archives of Neurology and Psychiatry* and are successfully conducting the same; therefore, be it
>
> *Resolved*, That this section hereby express to the Trustees of the American Medical Association and to the managing editor their appreciation of and thanks for this action.

Dr. Charles K. Mills, Philadelphia, read a paper on "Neurologic and Psychiatric Experiences Illustrative of Real Progress and of Fads and Fallacies in Therapeutics." No discussion.

Dr. Elmer E. Southard, Boston, read a paper on "The Range of the General Practitioner in Psychiatry." Discussed by Dr. E. Stanley Abbot, Belmont, Mass.

Dr. William G. Spiller, Philadelphia, read a paper on "Congenital Tumor (Telangiectasis) and Associated Cerebral Movements." Discussed by Dr. H. H. Hoppe, Cincinnati.

Dr. Leo M. Crafts, Minneapolis, read a paper on "Original Test for the Pathologic Great Toe Sign with Illustrative Cases." Discussed by Dr. George A. Moleen, Denver.

Dr. Tom B. Throckmorton, Des Moines, read a paper on "Clinical Report of a Case of Tumor of the Pons Varolii." Discussed by Drs. H. H. Hoppe and F. W. Langdon, Cincinnati.

Drs. Peter Bassoe and George B. Hassin, Chicago, presented a paper on "The Histologic Changes in the Brain in Lethargic Encephalitis." Discussed by Dr. Max H. Weinberg, Pittsburgh.

Dr. Beverly R. Tucker, Richmond, Va., read a paper on "The Rôle of the Pituitary Gland in Epilepsy." Discussed by Drs. Walter Timme, New York; H. H. Hoppe, Cincinnati; E. B. Angell, Rochester, N. Y.; George A. Moleen, Denver; Albert E. Sterne, Indianapolis, and Irving J. Sands, New York.

FRIDAY, JUNE 13—AFTERNOON

In the absence of the chairman, the meeting was called to order at 2 o'clock by Dr. H. H. Hoppe, Cincinnati.

Dr. Harry H. Drysdale, Cleveland, read a paper on "A Case of Hysterical Hemiplegia Following a Shrapnel Wound of the Scalp, and Presenting Interesting Clinical Features." Discussed by Drs. Alfred Gordon, Philadelphia; Tom A. Williams, Washington, D. C.; Albert E. Sterne, Indianapolis; Lewis J. Pollock, Chicago; Hugh T. Patrick, Chicago; W. S. Lindsay, Topeka, Kan.; Foster Kennedy, New York; Edward E. Mayer, Pittsburgh; Julius Grinker, Chicago, and Harry H. Drysdale, Cleveland.

Dr. Alfred Gordon, Philadelphia, read a paper on "Multiple Neuritis of Toxi-Infectious Origin with Especial Reference to Diabetic Polyneuritis." No discussion.

Dr. George Wilson, Philadelphia, read a paper on "The Resemblance of the Sensory Symptoms of Diphtheritic Multiple Neuritis to those of Anemic Cord Changes." Discussed by Dr. W. W. Richardson, Mercer, Pa.

Dr. William H. Robey, Jr., Boston, read a paper on "Nervous System Sequelae in Three-Day Fever." Discussed by Drs. Charles A. Rosewater, Newark, N. J.; W. H. Mayer, Pittsburgh, and Max H. Weinberg, Pittsburgh.

SECTION ON DERMATOLOGY

WEDNESDAY, JUNE 11—AFTERNOON

The meeting was called to order at 2:20 by the chairman, Dr. Otto H. Foerster, Milwaukee.

Dr. Sigmund Pollitzer, New York, presented the following resolution, which was adopted:

Resolved, That in the opinion of this section the subject of syphilis properly belongs to the Section on Dermatology; and

Resolved, That the House of Delegates be petitioned to amend the title of this section by adding to its present title the words *and Syphilis*.

The chairman appointed the following nominating committee: Drs. Howard Morrow, San Francisco; Harry G. Irvine, Minneapolis, and Richard L. Sutton, Kansas City, Mo.

Dr. Otto H. Foerster, Milwaukee, read the chairman's address entitled "Dermatology and Associated Disorders of the Mucous Membranes."

The following papers were read as a symposium on "Dermatology and Syphilology During the War":

Dr. Warren Walker, Philadelphia: "Dermatology and Syphilology in the Army."

Dr. Henry H. Hazen, Washington, D. C.: "Dermatology and Syphilology in a Medical Advisory Board."

Dr. C. Guy Lane, Woburn, Mass.: "Experiences with Scabies at a Debarkation Port."

Dr. Harry G. Irvine, Minneapolis: "Responsibilities in the Treatment of Syphilis."

These four papers were discussed by Drs. Hugh Young, Baltimore; F. C. Knowles, Philadelphia; William Allen Pusey, Chicago; Rachelle S. Yarros, Chicago; Harold N. Cole, Cleveland; C. C. Pierce, Washington, D. C.; Jay Frank Schamberg, Philadelphia; F. W. Cregor, Indianapolis; W. D. Calvin, Ft. Wayne, Ind.; William H. Guy, Pittsburgh; Henry H. Hazen, Washington, D. C., and Harry G. Irvine, Minneapolis.

THURSDAY, JUNE 12—MORNING

The meeting was called to order at 9:15 by the chairman.

Dr. Harold N. Cole and Sidney Littman, Cleveland, presented a paper entitled "A Clinical Study on the Use of Calomel Inunctions." Discussed by Drs. Jay Frank Schamberg, Philadelphia; Joseph Zeisler, Chicago; Harry G. Irvine, Minneapolis; Richard L. Sutton, Kansas City, Mo.; Henry H. Hazen, Washington, D. C., and Harold N. Cole, Cleveland.

Dr. John E. Lane, New Haven, Conn., read a paper on "Vitiligo and Syphilis: An Examination for the Evidence of Syphilitic Vitiligo." Discussed by Drs. William Allen Pusey, Chicago; Harry G. Irvine, Minneapolis; Jay Frank Schamberg, Philadelphia; Joseph Zeisler, Chicago; Henry R. Varney, Detroit, and John E. Lane, New Haven, Conn.

Drs. Jay Frank Schamberg and Rose Hirschler, Philadelphia, presented a paper entitled "The Treatment of Syphilis." Discussed by Drs. Joseph Zeisler, Chicago; William H. Guy, Pittsburgh; John E. Lane, New Haven, Conn.; Harry G. Irvine, Minneapolis; Henry H. Hazen, Washington, D. C., and Jay Frank Schamberg, Philadelphia.

Dr. William H. Guy, Pittsburgh, read a paper on "Observations on the Treatment of Syphilis." Discussed by Drs. William Allen Pusey, Chicago; Harold N. Cole, Cleveland; Henry E. Michelson, Minneapolis; Fred Wise, New York, and William H. Guy, Pittsburgh.

Dr. Henry E. Michelson, Minneapolis, read a paper on "Syphilitic Epididymitis." No discussion.

Dr. Richard L. Sutton, Kansas City, Mo., read a paper on "Ragweed Dermatitis." Discussed by Drs. C. A. Simpson, Washington, D. C.; J. H. Blaisdell, Boston; Everett S. Lain, Oklahoma City; William Allen Pusey, Chicago; Harold N. Cole, Cleveland; Fred Wise, New York; Jay Frank Schamberg, Philadelphia; H. J. Perry, Boston, and Richard L. Sutton, Kansas City, Mo.

Dr. Henry R. Varney, Detroit, read a paper on "Importance of Normal Amount of Oil in the Skin." Discussed by Drs. Richard L. Sutton, Kansas City, Mo.; Harold N. Cole, Cleveland; William Allen Pusey, Chicago; John E. Lane, New Haven, Conn.; G. A. Hare, Fresno, Calif.; C. A. Simpson, Washington, D. C., and Henry R. Varney, Detroit.

FRIDAY, JUNE 13—AFTERNOON

The meeting was called to order at 2:15 by the chairman.

The following officers were elected: chairman, Dr. Oliver Samuel Ormsby, Chicago; vice chairman, Dr. John E. Lane, New Haven, Conn.; secretary, Dr. Walter J. Highman, New York; delegate, Dr. George M. MacKee, New York, alternate, Dr. William Allen Pusey, Chicago.

Dr. Howard Morrow, San Francisco, read a paper on "Two Years of Radium." Discussed by Drs. William Allen Pusey, Chicago; Everett S. Lain, Oklahoma City; William H. Guy, Pittsburgh, and Howard W. Morrow, San Francisco.

Dr. Fred Wise, New York, read a paper on "Roentgen-Ray Treatment of Widespread and Generalized Skin Diseases." Discussed by Drs. Everett S. Lain, Oklahoma City; George M. MacKee, New York; J. D. Gibson, Denver; Walter J. Highman, New York; Joseph Zeisler, Chicago; Henry H. Hazen, Washington, D. C.; William Allen Pusey, Chicago; R. A. McDonnell, New Haven, Conn., and Fred Wise, New York.

Dr. William L. Clark, Philadelphia, read a paper on "Treatment of Nevus Vasculosis and Other Skin Defects by the Electrodesiccation Method, Ultraviolet Rays, Radium and Electrolysis." Discussed by Dr. Henry H. Hazen, Washington, D. C.; William Allen Pusey, Chicago; Laura A. Lane, Faribault, Minn.; John E. Lane, New Haven, Conn.; J. D. Gibson, Denver, and William L. Clark, Philadelphia.

Dr. J. Frank Wallis, Washington, D. C., read a paper on "The Moulage as a Record Employed at the Army Medical Museum." Discussed by Drs. William Allen Pusey, Chicago; J. D. Gibson, Denver, and J. Frank Wallis, Washington, D. C.

Drs. Udo J. Wile and Lyle Kingery, Ann Arbor, Mich., presented a paper on "The Etiology of Common Warts: An Experimental Study." Discussed by Drs. William T. Corlett, Cleveland; William C. MacCarty, Rochester, Minn.; Harry G. Irvine, Minneapolis; Udo J. Wile, Ann Arbor, Mich., and Lyle Kingery, Ann Arbor, Mich.

Dr. George M. MacKee, New York, read a paper on "Dermatothlasia." Discussed by Drs. Udo J. Wile, Ann Arbor, Mich.; Fred Wise, New York; William Allen Pusey, Chicago; J. D. Gibson, Denver; E. Graham Little, London, England, and George M. MacKee, New York.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

WEDNESDAY, JUNE 11—MORNING

The meeting was called to order at 9 a. m. by the chairman, Dr. C. St. Clair Drake, Springfield, Ill.

Dr. C. St. Clair Drake read as the chairman's address a paper on "The Influence of the War on Preventive Medicine and Public Health," which was referred to the Committee on Resolutions. The paper was discussed by Drs. J. P. Davin, New York, and C. C. Pierce, Washington, D. C.

Dr. Juan Guiteras, Havana, Cuba, read a paper on "Public Health Problems of the Southern Countries." Discussed by Dr. N. T. McLean, U. S. Navy; Mr. L. I. Dublin, New York, and Dr. Juan Guiteras.

Dr. Juan Guiteras, Havana, Cuba; Sir Arthur Newsholme, England, and Capt. René Sand, Brussels, Belgium, were nominated for Honorary Fellowship in the Association.

Dr. William E. Darnall, Atlantic City, N. J., read a paper on "What New Jersey Has Done in Mosquito Extermination." Discussed by Drs. B. Franklin Royer, Philadelphia; Juan Guiteras, Havana, Cuba; Dr. John A. Ferrell, New York; J. D. McLean, Harrisburg, Pa.; John P. Davin, New York; Arthur T. McCormack, Bowling Green, Ky., and William E. Darnall, Atlantic City, N. J.

Dr. Leslie L. Lumsden, Washington, D. C., read a paper on "Recent and Pending Legislation Affecting Public Health Control." Discussed by Drs. Arthur T. McCormack, Bowling Green, Ky., and W. S. Rakin, Raleigh, N. C.

A resolution endorsing a bill pending in Congress providing for physical education, etc., was introduced, approved and referred to the House of Delegates.

Dr. A. T. McCormack, Bowling Green, Ky., moved that a representative of the American Medical Association be appointed as a member of the National Council on Public Health Education. The motion was seconded and carried and referred to the House of Delegates.

Dr. Bertis R. Wakeman, Hornell, N. Y., read a paper on "The Demand for Community Nursing Service in Rural Districts."

The secretary, Dr. D. B. Lowe, Akron, Ohio, presented the proposed By-Laws for the section adopted at the February meeting of the secretaries of the sections. On motion duly seconded and carried the By-Laws were adopted as read.

The paper by Dr. Allen W. Freeman, Columbus, Ohio, on "Ohio's Health Plan" (not read) was discussed by Dr. J. N. Hurty, Indianapolis; Mr. John A. Lapp, director of the Health Insurance Commission of Ohio, and Drs. Hastings, Canada; John P. Davin, N. Y.; C. St. Clair Drake, Springfield, Ill.; Arthur T. McCormack, Bowling Green, Ky.; Otto P. Geier, Cincinnati; J. F. Hogan, Baltimore; Harold B. Wood, Providence, R. I.; L. L. Lumsden, Washington, D. C.

The chair appointed as a nominating committee Drs. Arthur T. McCormack, Bowling Green, Ky.; Guy L. Kiefer, Detroit, and L. L. Lumsden, Washington, D. C.

THURSDAY, JUNE 12—MORNING

The meeting was called to order at 9 o'clock by the chairman.

The following officers were elected: chairman, Dr. James A. Hayne, Columbia, S. C.; vice chairman, Dr. John D. McLean, Harrisburg, Pa.; secretary, Dr. Clarence D. Selby, Toledo, Ohio; delegate, Dr. C. St. Clair Drake, Springfield, Ill.; alternate, Dr. W. S. Rankin, Raleigh, N. C.

Dr. George Thomas Palmer, Springfield, Ill., read a paper on "General Health Activities and Their Influence on Tuberculosis Mortality." Discussed by Drs. L. L. Lumsden, Washington, D. C.; Juan Guiteras, Havana, Cuba; John P. Davin, New York; William C. Woodward, Boston; Arthur T. McCormack, Bowling Green, Ky., and George Thomas Palmer, Springfield, Ill.

A resolution offered by Dr. L. L. Lumsden, Washington, D. C., recommending amendments to the by-laws providing for elimination from membership of those who refuse or fail to report communicable diseases was discussed by Mr. Frederick L. Hoffman, Newark, N. J., and Drs. J. P. Davin, New York; C. St. Clair Drake, Springfield, Ill.; Wilfred H. Kellogg, San Francisco; Dr. S. L. Jepson, Charleston, W. Va.; Dr. L. D. Rawlings, Chicago; J. D. McLean, Harrisburg, Pa.; William C. Woodward, Boston; Oscar Dowling, Shreveport, La.; D. B. Lowe, Akron, Ohio, and L. L. Lumsden, Washington, D. C.

(Not submitted to the House of Delegates.)

Dr. Franklin C. Gram, Buffalo, read a paper on "The Aftermath of Influenza."

Mr. Frederick L. Hoffman, Newark, N. J., read a paper on "Some Practical Statistics of Influenza Morbidity and Mortality."

These two papers were discussed by Drs. A. Leo Franklin, Cumberland, Md.; E. B. Freilich, Chicago; Bertis R. Wakeman, Hornell, N. Y.; Sir Arthur Newsholme, England; Victor C. Vaughan, Ann Arbor, Mich.; Wilfred H. Kellogg, San Francisco; Harold B. Wood, Providence, R. I.; Mr. L. I. Dublin, New York; Dr. Hastings, Toronto, Canada; Franklin C. Gram, Buffalo, and Mr. Frederick L. Hoffman.

Dr. C. C. Pierce, Washington, D. C., read a paper on the "Progress of Venereal Disease Control." Discussed by Dr. Wilfred H. Kellogg, San Francisco; A. E. Chase, Texarkana; Franklin L. Gram, Buffalo; L. D. Rawlings, Chicago, and C. C. Pierce, Washington, D. C.

Dr. H. A. Streator, Boston, presented a resolution calling on Congress to make appropriations for the Public Health Service. Discussed by Dr. J. W. Schereschewsky, Washington, D. C. Amended and adopted.

(Not submitted to the House of Delegates.)

Dr. Leopold Marcus, New York, read a paper on "Open Air Classes in New York City." Discussed by Miss Annie Morrison, Grand Rapids, Mich.

Dr. Josephine B. Neal, New York, read a paper on "Encephalitis Lethargica." Discussed by Dr. J. F. Hogan, Baltimore.

FRIDAY, JUNE 13—AFTERNOON

A joint meeting was held with the Sections on Pharmacology and Therapeutics and Pathology and Physiology.

SECTION ON UROLOGY

WEDNESDAY, JUNE 11—MORNING

The meeting was called to order at 9:20 by the chairman, Dr. W. F. Braasch, Rochester, Minn.

Dr. W. F. Braasch read the chairman's address entitled "Dilatation of the Ureter and Renal Pelvis." Discussed by Drs. Guy L. Hunner, Baltimore; Hugh H. Young, Baltimore; Leo Buerger, New York; A. E. Goldstein, Baltimore; John R. Caulk, St. Louis, and Alfred I. Folsom, Dallas, Texas.

Dr. William J. Mayo Rochester, Minn., read a paper on "Hematogenous Infections of the Kidneys." Discussed by Drs. Hugh H. Young, Baltimore; William Linder, Brooklyn; Guy L. Hunner, Baltimore; Leon Louria, Brooklyn, and Frank Hinman, San Francisco.

Dr. William E. Lower, Cleveland, read a paper on "Ureteral Transplantation in Inoperable Conditions of the Bladder." Discussed by Dr. B. A. Thomas, Philadelphia.

Dr. Albert J. Ochsner, Chicago, read a paper on "Clinical Observations in the Treatment of Nephrolithiasis." Discussed by Drs. Charles M. Harpster, Toledo, Ohio; V. D. Lespinasse, Chicago; A. J. Crowell, Charlotte, N. C., and Guy L. Hunner, Baltimore.

The chairman appointed Drs. William C. Quinby, John R. Caulk and Carl Wheeler as temporary members of the executive committee in the absence of the three regular members.

Dr. John R. Caulk, St. Louis, read a paper on "Urologic Findings in Diseases of the Central Nervous System." No discussion.

Dr. Anton G. Rytina, Baltimore, read a paper on "Relief of Essential Hematuria by Intrapelvic Injections of Silver Nitrate." No discussion.

THURSDAY, JUNE 12—MORNING

Dr. Budd C. Corbus, Chicago, read a paper on "The Civilian Venereal Disease Dispensary as a War Measure."

Dr. Oswald S. Lowsley, New York, read a paper on "Some Problems in Urology in the United States Navy."

Dr. Gideon Timberlake, Baltimore, read a paper on "The Army School of Urology."

Dr. Hugh H. Young, Baltimore, read a paper on "Department of Urology, American Expeditionary Forces."

Dr. Elmer B. Tauber, Cincinnati, read a paper on "The Early Diagnosis and a Comparative Standardization of the Treatment of Syphilis."

These five papers were discussed by Drs. Abraham L. Wolbarst, New York; Irving Simon, Nashville, Tenn.; Harry W. Plaggemeyer, Detroit; V. D. Lespinasse, Chicago; A. G. Rytina, Baltimore; William E. Keane, Detroit; J. R. Dillon, San Francisco; P. A. Jacobs, Cleveland; Elmore B. Tauber, Cincinnati, and Hugh H. Young, Baltimore.

The chairman announced that the election of officers would be held on Friday in the future, instead of on Thursday.

The chairman brought before the section for adoption certain standing rules for the sections which were approved at a conference of the section secretaries.

The resolutions were adopted as read.

The foreign delegates in attendance at this annual session were nominated as Honorary Fellows of the American Medical Association.

Dr. Leo Buerger, New York, read a paper on "Contracture of the Neck of the Bladder: Its Pathology and Operative Treatment." Discussed by Drs. Hugh H. Young, Baltimore; William C. Quinby, Boston; Oswald S. Lowsley, New York; H. G. Bugbee, New York, and Alexander Randall, Philadelphia.

Dr. Alfred I. Folsom, Dallas, Texas, read a paper on "Malakoplakia of the Bladder: Report of Two Cases." Discussed by Dr. Arthur L. Chute, Boston.

FRIDAY, JUNE 13—MORNING

The following officers were elected: chairman, Dr. William E. Lower, Cleveland; vice chairman, Dr. Richard F. O'Neil, Boston; secretary, Dr. E. O. Smith, Cincinnati; delegate, Dr. Edward L. Keyes, Jr., New York; alternate, Dr. H. G. Hamer, Indianapolis.

Dr. Noah E. Aronstam, Detroit, read a paper on "The Frequency and Significance of Granular Urethritis." No Discussion.

Dr. Ernest M. Watson, Buffalo, read a paper on "The Colliculus Seminalis at Birth: With a Report of the Origin, Development and Zonal Distribution of Its Gland Tubules." Discussed by Drs. Anton G. Rytina, Baltimore; Gideon Timberlake, Baltimore, and L. Herman, Philadelphia.

Dr. Harry W. Plaggemeyer, Detroit, read a paper on "Report on Shell Fractures of Spine, Studied at Walter Reed Army General Hospital, with Observations on Changes in Kidney and Bladder Function." Discussed by Drs. Budd C. Corbus, Chicago; Abraham L. Wolbarst, New York; Francis R. Hagner, Washington, D. C.; V. D. Lespinasse, Chicago; Hugh H. Young, Baltimore; William E. Lower, Cleveland; John R. Caulk, St. Louis, and Harry W. Plaggemeyer, Detroit.

Dr. William C. Quinby, Boston, read a paper on "Some Urologic Aspects of Dermoid Cysts." Discussed by Drs. Irving Simon, Nashville, Tenn.; Hugh H. Young, Baltimore, and Arthur L. Chute, Boston.

Dr. Frank Hinman, San Francisco, read a paper on "Etiology of Vesical Diverticulum." Discussed by Drs. V. D. Lespinasse, Chicago; Dr. William E. Lower, Cleveland; Dr. Hugh H. Young, Baltimore; Anton G. Rytina, Baltimore, and Francis R. Hagner, Washington, D. C.

SECTION ON ORTHOPEDIC SURGERY

WEDNESDAY, JUNE 11—MORNING

The section was called to order at 9:20 by the chairman, Dr. Emil S. Geist, Minneapolis.

Dr. Edwin W. Ryerson, Chicago, read a paper on "Intermedullary Beef-Bone Splints in Fractures of Long Bones: New Technic of Application." Discussed by Mr. Ernest W. Hey Groves, England, and Drs. Horace R. Allen, Indianapolis; Robert McE. Schauffler, Kansas City, Mo.; Joseph E. Root, Hartford, Conn.; Fred S. Williams, Bridgeport, Conn., and Edwin E. Ryerson, Chicago.

Dr. James W. Sever, Boston, read a paper on "Osteomyelitis." Discussed by Drs. Henry Ling Taylor, New York; Reginald H. Sayre, New York; Mr. Ernest W. Hey Groves, England; Drs. James T. Watkins, San Francisco; Walter M. Brickner, New York, and James W. Sever, Boston.

Dr. William L. Sneed, New York, read a paper on "Surgical Treatment and After-Care of Old, Unreduced Pott's Fractures." Discussed by Dr. Zabdiel B. Adams, Boston; Mr. Ernest W. Hey Groves, England; Drs. Willis C. Campbell, Memphis, Tenn.; James W. Sever, Boston; Harry E. Stewart, New Haven; Charles M. Jacobs, Chicago; Fred J. Gaenslen, Milwaukee, and William L. Sneed, New York.

The following two papers were read as a symposium on "Amputations":

Dr. Clarence L. Starr, Toronto: "A Consideration of the Problems Presented by Amputations."

Dr. E. J. Rose, Gallipolis, Ohio: "Amputation Stumps in Relation to the Fitting of Artificial Limbs."

These two papers were discussed by Drs. Philip D. Wilson, Columbus, Ohio; Reginald H. Sayre, New York; Jabez N. Jackson, Kansas City, Mo.; Edwin W. Ryerson, Chicago; C. W. Hopkins, Chicago; Clarence L. Starr, Toronto, and E. J. Rose, Gallipolis.

THURSDAY, JUNE 12—MORNING

The meeting was called to order at 9:15 by the chairman.

Dr. William C. Peters, Bangor, Me., read a paper on "The Foot Problem in the Army." Discussed by Drs. Edwin W. Ryerson, Chicago; Roland Hammond, Providence, R. I.; Henry Ling Taylor, New York; C. L. Lowman, Los Angeles; John Ridlon, Chicago, and James T. Rugh, Philadelphia.

Dr. Rudolph S. Reich, Cleveland, read a paper on "Improvised Orthopedic Exercising Apparatus." Discussed by Drs. Zabdiel B. Adams, Boston, and Rudolph S. Reich, Cleveland.

Dr. Russell A. Hibbs, New York, read a paper on "An Operation for Claw Foot." Discussed by Drs. Benjamin P. Farrell, New York; Fred S. Williams, Bridgeport, Conn.; James P. Lord, Omaha; John Ridlon, Chicago; Edwin W. Ryerson, Chicago; James W. Sever, Boston; Samuel W. Boorstein, New York; Russell A. Hibbs, New York; John L. Porter, Chicago, and Ellis W. Jones, Los Angeles.

Dr. Emil S. Geist, Minneapolis, read the chairman's address, entitled, "Some of the Things that Orthopedic Surgery has Done for the War and that the War has Done for Orthopedic Surgery." No discussion.

Dr. James T. Rugh, Philadelphia, read a paper on "Precombat Orthopedic Work in the United States." Discussed by Drs. Harold D. Corbusier, Plainfield, N. J.; Zabdiel B. Adams, Boston; Charles M. Jacobs, Chicago, and James T. Rugh, Philadelphia.

Dr. Leo Meyer, New York, read a paper on "The Orthopedic Surgeon and Industrial Accidents." Discussed by Drs. A. H. Cilley, New York; John Ridlon, Chicago; Samuel W. Boorstein, New York; C. A. Lowman, Los Angeles, and Leo Meyer, New York.

Dr. James C. Graves, Jr., Spokane, Wash., read a paper on "The Curative Work Shop." Discussed by Drs. Zabdiel B. Adams, Boston; Horace R. Allen, Indianapolis; Albert H. Freiberg, Cincinnati; Roland Hammond, Providence, R. I.; H. Winnett Orr, Lincoln, Neb.; A. H. Cilley, New York; John Ridlon, Chicago; Harold D. Corbusier, Plainfield, N. J.; James T. Rugh, Philadelphia; J. D. Griffith, Kansas City, Mo., and James C. Graves, Jr., Spokane, Wash.

FRIDAY, JUNE 13—MORNING

The meeting was convened at 9 o'clock by the chairman

The following officers were elected for the ensuing year: Chairman, Dr. George W. Hawley, Bridgeport, Conn.; vice chairman, Dr. Roland Hammond, Providence, R. I.; secretary, H. B. Thomas, Chicago (continued); delegate, Dr. John Ridlon, Chicago.

Dr. Ridlon reported that at a recent meeting of the House of Delegates a resolution had been presented to the effect that no member of the Association should read a paper before any section on two succeeding years, except at the unanimous request of the section. He stated that this resolution had been tabled, and asked for instructions as to his own action should it be taken from the table.

Dr. Albert H. Freiberg, Cincinnati, moved that it was the sense of the meeting that this was not in accord with the opinion of the members of the Section on Orthopedic Surgery, who believed that this matter should be left to the individual sections for their own decision. The motion was seconded and carried.

Dr. William C. Peters, Bangor, Maine, moved that the section go on record, since very little or no clinical work had been done in the reconstruction hospitals, as recommending that this work be put into the hands of orthopedic surgeons exclusively and controlled completely by them; reconstruction work being understood to include all curative work and occupational therapy. Seconded and carried. The matter was entrusted to Dr. Ridlon to bring before the Association and have it go through the proper channels for reaching the Surgeon-General.

Dr. George W. Hawley, Bridgeport, Conn., read a paper on "Early Functional Results after Secondary Suture, Base Hospital No. 9, France." Discussed by Drs. William W. Plummer, Buffalo; Joel E. Goldthwait, Boston; Reginald H. Sayre, New York; Willis C. Campbell, Memphis, Tenn.; H. W. Orr, Lincoln, Neb.; Joseph Byrne, New York, and George W. Hawley, New York.

Dr. Joel E. Goldthwait, Boston, read a paper on "The Standardized Splints and Methods of Treatment in Bone and Joint Injury, A. E. F." Discussed by Drs. William W. Plummer, Buffalo; J. A. Blake, New York; Kellogg Speed, Chicago; Leo Meyer, New York; Samuel C. Baldwin, Salt Lake City; Reginald H. Sayre, New York; H. R. Allen, Indianapolis; H. W. Orr, Lincoln, Neb., and Joel E. Goldthwait, Boston.

Dr. Willis C. Campbell, Memphis, Tenn., read a paper on "Fracture of the Neck of the Femur; and Analysis of One Hundred and Sixteen Cases."

Dr. Melvin S. Henderson, Rochester, Minn., read a paper on "Ununited Fractures of the Hip."

These two papers were discussed by Drs. Ellis W. Jones, Los Angeles; Wallace Blanchard, Chicago; Hugh McKenna, Chicago; John Ridlon, Chicago; Z. B. Adams, Boston; H. L. Taylor, New York; Charles E. Thompson, Scranton; James W. Sever, Boston; Fred J. Gaenslen, Milwaukee; Edwin W. Ryerson, Chicago; Willis C. Campbell, Memphis, Tenn., and Melvin S. Henderson, Rochester, Minn.

The following three papers were read as a "Symposium on Nerve Surgery":

Dr. Karl W. Ney, New Orleans: "Indications for Surgical Intervention in Peripheral Nerve Injuries."

Dr. Charles A. Elsberg, New York: "Operative Treatment of Peripheral Nerve Injuries."

Dr. Murray S. Danforth, Providence, R. I.: "Postoperative Treatment of Peripheral Nerve Injuries."

These three papers were discussed by Drs. Frederick C. Kidner, Detroit; Samuel W. Boorstein, New York; Dean D. Lewis, Chicago; M. B. Tinker, Ithaca, N. Y.; Tom A. Williams, Washington, D. C.; W. W. Babcock, Philadelphia, and Karl W. Ney, New Orleans.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

Wednesday, June 11—Morning

The meeting was called to order by the chairman, Dr. William M. Beach, Pittsburgh.

Dr. Beach read the chairman's address, entitled "Spirit of the Physician in War and Peace." No discussion.

Dr. Dwight H. Murray, Syracuse, N. Y., read a paper on "Constipation: A New Definition, the Primary Causes and Its Hygienic Treatment." Discussed by Drs. J. M. Frick, Toledo, Ohio; Louis Lefrak, New York; J. Coles Brick, Philadelphia; E. H. Terrell, Richmond, Va.; Mary Ella Dunning Rose, New York; Frank C. Yeomans, New York; Robert Hugh Rose, New York; J. Rawson Pennington, Chicago; R. W. Jackson, Fall River, Mass., and Nathan Rosewater, Cleveland.

Dr. Louis J. Hirschman, Detroit, read a paper on "Proctology in a War Hospital." Discussed by Drs. Alois B. Graham, Indianapolis; D. C. McKenney, Buffalo; John L. Jelks, Memphis, Tenn.; Dwight H. Murray, Syracuse, N. Y.; J. Coles Brick, Philadelphia; J. D. Reeder, Baltimore, and Aimé Chartier, Sorel, Quebec.

Dr. Charles J. Drueck, Chicago, read a paper on "Late Syphilis Within the Rectum."

Dr. Frank C. Yeomans, New York, read a paper on "Stricture of the Rectum."

These two papers were discussed by Drs. John L. Jelks, Memphis, Tenn.; Holland H. Donaldson, Pittsburgh; J. Rawson Pennington, Chicago; J. Coles Brick, Philadelphia; Dwight H. Murray, Syracuse, N. Y., and E. G. Martin, Detroit.

Dr. J. Rawson Pennington, Chicago, read a paper on "Examination of the Patient." Discussed by Drs. Frank C. Yeomans, New York; John L. Jelks, Memphis, Tenn., and E. G. Martin, Detroit.

Thursday, June 12—Morning

Dr. Anthony Bassler, New York, read a paper on "Gastric Cell Primary Atrophy."

Drs. Julius Friedenwald and Theodore H. Morrison, Baltimore, presented a paper on "Further Observations on the Gastro-Intestinal Disturbances Encountered in Pernicious Anemia."

These two papers were discussed by Drs. Max Einhorn, New York; Louis Lefrak, New York; Arthur F. Chace, New York; Martin E. Rehfuss, Philadelphia; J. A. Lichty, Pittsburgh, and G. A. Friedman, New York.

Dr. Walter C. Alvarez, San Francisco, read a paper on "The Metabolic Gradient Underlying Peristalsis." Discussed by Drs. Jacob Gutman, New York; Franklin W. White, Boston; James T. Case, Battle Creek, Mich., and Nathan Rosewater, Cleveland.

Dr. Thomas R. Brown, Baltimore, read a paper on "The Late Results of Supposedly Successful Operations on the Digestive Tract." Discussed by Drs. John A. Lichty, Pittsburgh; Alfred A. Strauss, Chicago; Julius Friedenwald, Baltimore; Robert Hugh Rose, New York; Harris Weinstein, New York; G. A. Friedman, New York; Henry Illoway, New York, and Byron C. Darling, New York.

Dr. Dudley Roberts, New York, read a paper on "Certain Limitations of Roentgen-Ray Diagnosis of Gastro-Intestinal Diseases."

Dr. Russell D. Carman, Rochester, Minn., read a paper on "The Operability of Cancer of the Stomach as Determined by the Roentgen Ray."

These two papers were discussed by Drs. Anthony Bassler, New York; Byron C. Darling, New York; Louis J. Hirschman, Detroit; George E. Pfahler, Philadelphia; James T. Case, Battle Creek, Mich.; R. Walter Mills, St. Louis; L. Gregory Cole, New York, and Thomas R. Brown, Baltimore.

Friday, June 13—Morning

The following officers were elected: chairman, Dr. Frank Smithies, Chicago; vice chairman, Dr. Louis J. Hirschman, Detroit; secretary, Dr. Horace W. Soper, St. Louis; delegate, Dr. Alois B. Graham, Indianapolis.

Dr. Max Einhorn, New York, read a paper on "Further Experiences with the String Test." Discussed by Drs. Sidney K. Simon, New Orleans; Clement R. Jones, Pittsburgh; Israel O. Palefski, New York; Julius Friedenwald, Baltimore; William Van V. Hayes, New York, and L. Gregory Cole, New York.

Dr. Sidney K. Simon, New Orleans, read a paper on "The Importance of Detecting Protozoal Cysts in the Feces."

Dr. John L. Jelks, Memphis, Tenn., read a paper on "The Prevalence of Ameba, Cercomonas Intestinalis-Hominis, and Pellagrous Infection in the South, the Responsibility for which Rests on Nation and State: Suggestions as to Means of Control."

These two papers were discussed by Drs. James C. Johnson, Atlanta, Ga.; E. J. Wood, Wilmington, N. C.; Anthony Bassler, New York; Ernest Zueblin, Cincinnati; J. Rawson Pennington, Chicago; William Allan, Charlotte, N. C.; J. M. Bell, St. Joseph, Mo., and Frank C. Yeomans, New York.

Dr. Seale Harris, Birmingham, Ala., read a paper on "Progress in Gastro-Enterology During the World War." Discussed by Drs. William M. Beach, Pittsburgh, and A. E. Austin, Boston.

Dr. Clement R. Jones, Pittsburgh, read a paper on "Influence of Endocrine Functioning on Gastro-Intestinal Conditions." Discussed by Drs. G. A. Friedman, New York; J. P. Sawyer, Cleveland; Solomon Solis Cohen, Philadelphia; Nathan Rosewater, Cleveland; Ernest Zueblin, Cincinnati, and H. S. Plummer, Rochester, Minn.

Drs. George David Stewart and William Howard Barber, New York, presented a paper entitled "The Gastric Hypermotility Associated with Diseases of the Gallbladder, Duodenum and Appendix: A Clinical and Experimental Study." Discussed by Drs. Anthony Bassler, New York; R. Walter Mills, St. Louis; Israel O. Palefski, New York; William Van V. Hayes, New York, and G. A. Friedman, New York.

SECTION ON MISCELLANEOUS TOPICS

WEDNESDAY, JUNE 11—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Harry E. Mock, Chicago.

Dr. Mock read the chairman's address, entitled "A Talk Concerning the Development of Human Resources."

Dr. William I. Clarke, Jr., Worcester, Mass., read a paper on "Preventive Surgery as Demonstrated by Industrial Practice." Discussed by Drs. William S. O'N. Sherman, Pittsburgh; Otto P. Geier, Cincinnati, and Joseph W. Schereschewsky, Washington, D. C.

Dr. C. E. Ford, New York, read a paper on "Industrial Medical Practice and Sickness Prevention as a Factor in Public Health." Discussed by Drs. William A. Sawyer, Philadelphia; David L. Edsall, Boston; Charles J. Hastings, Toronto; Otto P. Geier, Cincinnati; S. Dana Hubbard, New York; Augustus Wadsworth, Albany, N. Y., and Guy L. Kiefer, Detroit.

The following papers were read as a symposium on the "Scope of Industrial Medicine and Surgery:

Dr. Joseph W. Schereschewsky, Washington, D. C.: "The Enlarged Program of the United States Public Health Service, Division of Industrial Hygiene and Medicine."

George A Soper, Sanitary Corps, U. S. Army: "The Efficacy of Measures for the Prevention of Disease."

These papers were discussed by Colonel Kramer, Department on Sanitation, U. S. Army, and Drs. A. E. Chase, Texarkana; A. E. Norton, Philadelphia; Charles J. Hastings, Toronto; H. H. Koons, Los Angeles; W. V. Smith, Alameda, Calif.; Clarence D. Selby, Toledo, Ohio, and Eli Harris, New York.

FRIDAY, JUNE 13—AFTERNOON

The meeting was called to order at 2 p. m. by the chairman.

Dr. Frank Billings, Chicago, read a paper on "Lessons from Rehabilitation of Disabled Soldiers, and Their Application to the Industrial Army." Discussed by Dr. James Bordley, Jr., Baltimore.

Dr. William Alfred Sawyer presented the following resolution, which was seconded and unanimously adopted:

> WHEREAS, The recent influenza epidemic caused approximately 500,000 deaths in the United States; and
>
> WHEREAS, A large proportion of these deaths were produced by pneumonia and other complications; and
>
> WHEREAS, Influenza, pneumonia and allied diseases now cause approximately one tenth of all the deaths in the United States; and
>
> WHEREAS, Medical science is not yet in possession of complete data as to the cause, modes of transmission, prevention and cure of this disease and its complications, and
>
> WHEREAS, The possession of this knowledge is of grave social and economic concern to the nation; therefore be it
>
> *Resolved,* That it is the sense of those in attendance on the Sections on Pharmacology and Therapeutics, Physiology and Pathology, Preventive Medicine and Public Health here assembled to discuss influenza, that Congress should and is hereby urged to appropriate not less than $1,500,000 to be used under the direction of the U. S. Public Health Service for the investigation of the causes, modes of transmission, prevention and cure of influenza, pneumonia and allied diseases, this sum to be made available to July 1, 1922. (Not submitted to the House of Delegates.)

Mr. R. M. Little, New York, read a paper on "Better Industrial Relations and the Physician's Contribution."

Dr. Otto P. Geier, Cincinnati, read a paper on "Modernizing Our Medical Colleges by Adding Departments of Industrial Medicine and Public Health." Discussed by Drs. David L. Edsall, Boston; Tom A. Williams, Washington, D. C.; Eugene Lyman Fiske, New York; C. P. McCord, Cincinnati; Victor C. Vaughan, Ann Arbor, Mich.; Frank Billings, Chicago, and Gershom H. Hill, Des Moines.

Dr. Clarence D. Selby, Toledo, Ohio, read a paper on "Medical Service for the Small Industrial Units."

Dr. René Sand, Brussels, Belgium, read a paper on "The Industrial Rehabilitation of Belgium." Discussed by Drs. Victor C. Vaughan, Ann Arbor, Mich.; Otto P. Geier, Cincinnati; S. Adolphus Knopf, New York; Frank Billings, Chicago, and Andrew Macfarlane, Albany, N. Y.

REGISTRATION AT ATLANTIC CITY

The total registration at the Victory Meeting—the Atlantic City Session—was 4,929. Below are given two summaries, one by sections and one by states:

REGISTRATION BY SECTIONS

Practice of Medicine	1,486
Surgery, General and Abdominal	1,046
Obstetrics, Gynecology and Abdominal Surgery	309
Ophthalmology	425
Laryngology, Otology and Rhinology	327
Diseases of Children	217
Pharmacology and Therapeutics	45
Pathology and Physiology	66
Stomatology	41
Nervous and Mental Diseases	175
Dermatology	86
Preventive Medicine and Public Health	216
Urology	133
Orthopedic Surgery	113
Gastro-Enterology and Proctology	124
Registrations, not marking any one section	120
Total	4,929

REGISTRATION BY STATES

State	Number	State	Number
Alabama	24	New Jersey	363
Arizona	9	New Mexico	4
Arkansas	23	New York	749
California	88	North Carolina	81
Colorado	40	North Dakota	4
Connecticut	103	Ohio	314
Delaware	31	Oklahoma	18
Dist. of Columbia	135	Oregon	12
Florida	17	Pennsylvania	1,071
Georgia	51	Rhode Island	35
Idaho	7	South Carolina	42
Illinois	234	South Dakota	6
Indiana	114	Tennessee	65
Iowa	63	Texas	48
Kansas	30	Utah	15
Kentucky	54	Vermont	13
Louisiana	27	Virginia	111
Maine	15	Washington	17
Maryland	152	West Virginia	64
Massachusetts	149	Wisconsin	45
Michigan	127	Wyoming	4
Minnesota	74	Hawaii, Isthmian Canal Zone, Philippine Islands, Porto Rico and Unlocated	40
Mississippi	11	Foreign Countries	89
Missouri	77		
Montana	8		
Nebraska	42		
New Hampshire	14	Total	4,929

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SATURDAY, JUNE 28, 1919

THE MEASUREMENT OF FATIGUE IN DISEASE

Fatigue, that is, an unusual degree of susceptibility to fatigue, is a marked characteristic of a number of conditions of impaired vigor and usefulness that have become unexpectedly prominent during the war. Thus, in persons classed as subjects of neurocirculatory asthenia or the so-called effort syndrome and of "irritable heart," fatigue seems to be a conspicuous feature. The fatigue symptoms may be accentuated by even slight attempts at muscular activity. Sometimes it appears to be more marked in persons who may be described as emotionally sensitive. Fatigue plays a significant rôle in the efficiency of the human machine; so that its physiologic manifestations have become the subject of extensive investigation in relation to industrial conditions.[1]

Where psychic factors of sensation and personal impressions are involved it is manifestly difficult to secure data possessing the degree of accuracy that pulse rate, temperature, body weight, heat output, and other metabolic determinations afford. This explains why fatigue cannot be evaluated with the degree of quantitative accuracy that is possible with regard to many other bodily functions. Nevertheless, nothing short of some degree of scientific precision will enable the problems of fatigue to be studied with the same assurance of the validity of the conclusions reached as that which is expected elsewhere in physiologic medical research.

Among the more objective tests of fatigue that have been proposed, the vascular skin reaction long ago described by French physiologists as a white vasomotor reflex and recently introduced for this purpose by Ryan[2] has gained some clinical prominence. The test consists in making, with a suitable blunt instrument, a stroke on the skin of the forearm and noting by means of a stop-watch the time that elapses between the moment of the stimulation and the moment at which the white streak thus caused begins to fade. This time is shorter in the fatigued person.

Applied to persons suffering from an irritable heart, the Ryan skin test has shown itself in the hands of Lieutenant King[3] of the Army Medical Service to be of value in clinical medicine as well as in the industries. He finds that the day curve of fatigue estimations is much the same in the several groups of cases that have the syndrome of irritable heart as in those with organic heart disease. Patients with irritable heart who fall into the groups of general constitutional inferiority or pure physical inferiority show very rapid fatigue on exercise.

A comparison of strength tests, expressing the muscular efficiency of the patients, with their skin vasomotor reflexes indicates that there is a correspondence between the strength of the arteriolar musculature and the strength of the skeletal musculature in a given individual. The trend of King's studies is to indicate further that the readiness of fatigue following exertion is dependent on an actual physical phenomenon and is not merely of psychic origin. In other words, it is by no means justified to say that "fatigue is a habit" with those who are subject to the irritable heart. They do not merely imagine their fatigue; it has, to quote King, apparently a physical basis.

URANIUM AS AN INDUSTRIAL POISON

Certain toxicologic effects of salts of uranium have long been recognized and applied in the study of experimental physiology and pathology. Recently industrial conditions have arisen which may place this element in the class of possible dangers of occupation. Karsner and his collaborators[4] of the Western Reserve University School of Medicine, Cleveland, have asserted that in certain industries uranium is employed or appears as a by-product, and that with the war time scarcity of some other heavy metals, such as tungsten, uranium may be utilized as a partial substitute. In the production of radium, uranium oxid is produced in large quantities, and if uranium were employed in the steel industry the high temperatures used would lead to the formation of one or several oxids, the most important being uranium dioxid and uranous uranate, both of which are insoluble in water. In grinding, polishing, and perhaps in other operations, these oxids might appear in the form of a dust.

Animal experiments conducted by the Cleveland pathologists demonstrate that uranium oxid, the state in which the metal is most likely to reach the upper respiratory tract when distributed industrially in the form of dust, can be toxic and fatal when administered by mouth. This oxid is insoluble in water; but it will dissolve in gastric juice, so that the possibility of the formation of a soluble toxic salt is established. The production of nephritis by uranium salts has long been recognized as an experimental fact, and the method has served to facilitate the study of the pathology of renal functions. Karsner and his associates have observed that the excretion of uranium, so far as it is accomplished, is primarily by way of the kidneys. When functional and anatomic lesions arise in the kidneys through the presence of the poison, the decreased effectiveness of excretion makes matters worse by favoring an accumulation of the metal in the kidney. There is, probably, no special "affinity" of uranium for the kidney cells nor any unusual susceptibility to the poison on their part. The possibility of protecting the kidneys by the administration of alkalis to combat the concomitant acidosis in such cases represents one of the therapeutic considerations that experimental medicine has taught.[5]

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[1] Lee, F. S.: The Human Machine and Industrial Efficiency, New York, Longmans, Green & Co., 1918.

[2] Ryan, A. H.: The Quantitative Measurement of General Fatigue, Am. J. Physiol. **45**: 537 (March) 1918.

[3] King, J. T.: Fatigue in Irritable Heart and Other Conditions, Arch. Int. Med. **23**: 527 (April) 1919.

[4] Karsner, H. T., and Reimann, S. P.: Studies of Uranium Poisoning, I, The Toxicity of Certain Water-Insoluble Salts of Uranium, J. M. Res. **39**: 157 (Nov.) 1918. Karsner, H. T.; Reimann, S. P., and Brooks, S. C.: Studies of Uranium Poisoning, II, The Solubility of Uranium Oxide in Artificial and Human Gastric Juice, ibid. **39**: 163, 169, 177 (Nov.) 1918.

Incidentally it should be stated that uranium nitrate was admitted to the Ninth (the most recent) Revision of the U. S. Pharmacopeia. Surely the danger of this salt could not have been appreciated when this action was taken by the Revision Committee. There does not appear to be sufficient evidence of its therapeutic value to warrant inclusion in this official book. The drug is not included in Useful Drugs, prepared by the Council on Pharmacy and Chemistry. The Epitome of the U. S. Pharmacopeia, prepared for the use of physicians by a special committee of the Council on Pharmacy and Chemistry, has this to say under "Actions and Uses": "[Uranium nitrate] . . . has been used, without adequate justification, in the treatment of diabetes and cancer. Solutions are poisonous and produce glucosuria when injected subcutaneously, even in small doses." Our previous knowledge of this drug, now adequately supported by the work of Karsner, should lead the next Revision Committee to omit the drug from the Pharmacopeia.

SIGNIFICANT OBSERVATIONS ON MENINGOCOCCIC MENINGITIS

Fresh outbreaks of epidemic disease in unusual localities or at unexpected periods almost always serve to extend our knowledge of the subject by directing attention to novel aspects which are liable to be overlooked in the regular routine of experience. Contact with the unanticipated is not infrequently a potent stimulus to thought and an incentive for investigation. An unexpected outbreak of typhoid fever among troops that have been subjected to antityphoid vaccination, as has been observed in our army,[6] directs immediate attention to the limitations of this prophylactic measure and emphasizes that it must by no means be regarded as a substitute for the observance of sanitary precautions.[7] The appearance of influenza with unique manifestations serves to make clinicians skeptical as to alleged etiologic factors and causes them to bend their energies anew in the direction of discovering new or unsuspected infective agents. Variable phenomena in the incidence of pneumonia awaken an interest in the study of differential diagnosis.

Thus, epidemiologic phenomena have frequently pointed the way both to a better management of disease and to a clearer understanding of what is involved in it. A new instance is afforded by Olitsky's observations in an epidemic of meningococcic meningitis in a district of South China.[8] An epidemic of this sort among Southern Chinese has been practically unknown heretofore. A mortality of 85 per cent. among unsuitably treated patients bears renewed testimony of the appalling seriousness of the malady. The mechanism of disseminating the meningococcus, as outlined by Flexner,[9] consists in the ejection of the nasopharyngeal secretions into the surrounding atmosphere. The micro-organism is sensitive to an unsuitable environment and readily succumbs outside the body. Hence exceptionally favorable conditions for its immediate transference from person to person are necessary to promote infection. The favorable conditions, in this instance, were brought about by overcrowding during extremely cold weather, along with an outbreak of nasopharyngeal affections. In the area involved, 300,000 Chinese lived in a section about three miles long and one-half mile wide. Furthermore, the occurrence of a pathogenic type of the meningococcus seems to be essential. Hence we can understand why not a single case of the meningitis developed in a jail within the epidemic area. In a series of cases in prisoners living under hygienic conditions and examined by Olitsky, one quarter were found to be carriers. Of these, 50 per cent. yielded irregular or inagglutinable types; 34.3 per cent. the normal type, and only one person the para type.

Olitsky's observations further show that drainage of the spinal fluid, on which reliance was placed at one time, is still a far from satisfactory therapeutic procedure, although it apparently produced some decrease in the death rate. Moreover, the use of a curative serum of poor quality and low in agglutinin content was therapeutically ineffective. The finding of meningococci in the blood, although the observations were made postmortem, taken in connection with similar reports in the literature of the disease, suggests the possible desirability of combining intravenous with the customary intraspinal therapy. From the preventive standpoint the importance of detection and treatment of contact carriers, including the isolation of the "dangerous" carrier, as Olitsky designates the person who harbors numerous meningococci, particularly of the same type as the patients, was especially emphasized. Above all, the prevention of overcrowding is the prominent lesson to be derived from this work in the Far East.

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[5] MacNider, W. deB.: The Inhibition of the Toxicity of Uranium Nitrate by Sodium Carbonate, J. Exper. Med. **23**: 171 (Feb.) 1916; Relative Toxicity of Uranium Nitrate, J. Exper. Med. **26**: 1, 19 (July) 1917.

[6] Typhoid Vaccination No Substitute for S [illegible] ions, Pub. Health Rep. **34**: 605 (March 28) 1919.

[7] Typhoid Vaccination Not a Substitute for Sanitary Precautions, Current Comment, J. A. M. A. **72**: 1298 (May 3) 1919.

[8] Olitsky, P. K.: Experiences with a Recent Epidemic of [illegible]eningococcic Meningitis Among a Chinese Civil Population, A [illegible] **23**: 380 (March) 1919.

[9] Flexner, Simon: Mode of Infection, [illegible] Specific Treatment of Epidemic Meningit[illegible] (Aug. 25) 1917.

UNDERFEEDING AND GROWTH

Inadequate growth may be attributable to one or more of a number of conditions which deserve to be differentiated. The failure to increase in weight according to the normal expectation may result from underfeeding, from inappropriate food, or from pathologic defects either inherited or acquired. Inborn errors of growth form a special category which falls outside of the sphere of nutrition. The ingestion of food defective in quality rather than quantity may lead to deficiency disorders which may be more or less remediable by appropriate dietary measures. Infantile scurvy serves as an illustration.

The suppression or retardation of growth due to underfeeding per se until comparatively recently has been looked on as fraught with possible undesirable consequences for the victims of it. In experiments on animals, Osborne and Mendel[1] have shown that the capacity to grow in such instances of underfeeding is not entirely lost but is held in reserve until it is exercised. According to their observations, even when the period of stunting through underfeeding is prolonged beyond the time when growth usually ceases, the institution of proper diet will result in prompt resumption of growth and apparent completion of its usual cycle. After such retardations, the renewal of growth is attended with striking accelerations of the developmental processes. This phenomenon of unusually rapid growth following periods of growth suppression has also been studied in children.[2]

These facts regarding the body as a whole have been amplified by more recent findings in respect to the individual organs of the body. It is known that while some organs during inanition tend to maintain approximately their normal relative weight, and others continue to grow, still others undergo losses. The organs affected and the extent of the changes involved vary according to the age of the individual and the length and character of the inanition. Jackson and Stewart and others[3] at the University of Minnesota have noted the mode of recuperation of animals after realimentation. It was found that not all of the organs attain a normal weight in the same order or time; but, in general, it may be said that adequate size of all the more important structures is attained despite the earlier stunting. Whether overcompensatory growth occurs in some cases is not yet clear. For the clinic of childhood the significant indication by analogy is the probable recovery in the various organs after periods of undernutrition. The fortunate prospect of a return to normal in such cases furnishes a powerful incentive toward instituting appropriate dietary treatment wherever growth lags behind the conventional standards because of presumable underfeeding. Retarded growth therefore does not necessarily mean that the hope of attaining a perfect adult form and function is lost; on the contrary, when organic disease is absent there is every reason to encourage the proper restitution through diet. Such is the basis of the efforts devoted to the success of modern clinics for undernourished children.

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[1] Osborne, T. B., and Mendel, L. B.: The Resumption of Growth After Long Continued Failure to Grow, J. Biol. Chem. **23**: 439, 1915.

[2] Schloss, E.: Die Pathologie des Wachstums im Säuglingsalter, Berlin, 1911. Boas, F.: The Growth of Children, Science **36**: 815, 1912.

[3] Jackson, C. M., and Stewart, C. A.: Recovery of Normal Weight in the Various Organs of Albino Rats on Refeeding After Underfeeding from Birth for Various Periods, Am. J. Dis. Child. **17**: 329 (May) 1919. Myers, J. A.: Studies on the Mammary Gland, V, The Effects of Inanition on the Developing Mammary Glands in Male and Female Albino Rats from Birth to Ten Weeks of Age, ibid., p. 311.

Current Comment

IODIN AND THE THYROIDS

Iodin and its compounds have been employed for nearly a century in the treatment of disorders associated with the thyroid glands. When Baumann of Freiburg, in 1895, discovered that the thyroid glands contain iodin, there was immediate speculation as to the relation of this chemical element, not found elsewhere in the body in equally appreciable amounts, to the glandular function. The earliest assumption was that the "active principle" of the thyroids contains iodin. Some thyroids contain almost none of the element; but it has been noted that such glands used therapeutically do not seem to manifest the same physiologic activity that is exhibited by thyroid preparations containing iodin. In other words, the potency to produce certain physiologic effects after administration of thyroid has seemed to several investigators to depend on or parallel the iodin content. The active product isolated from the thyroid by Kendall of the Mayo Clinic is rich in iodin.[1] Gudernatsch has recorded the remarkable observation that the feeding of thyroid extract to tadpoles brings about rapid and marked metamorphoses in these animals. Swingle[2] has followed this with the further demonstration that iodin and its compounds fed to the larvae of the frog and the toad stimulate metamorphosis in these animals very rapidly; that is, the results resemble those induced by the hyperthyroidism already described. It has been assumed that all such effects are brought about by the intermediation of the thyroid glands in the animals fed. Allen[3] has shown that thyroidectomized larvae fail to undergo metamorphosis, but instead permanently retain their larval characters. But Swingle has since found that when inorganic iodin is fed to thyroidless larvae of toads, a metamorphosis occurs in an abnormally short time, despite the complete absence of the thyroid gland in them. He therefore concludes that if animals without the vestige of a thyroid gland are stimulated to complete metamorphosis in an abnormally short time by iodin, it would appear that iodin functions within the organism as a hormone itself, and that the gland functions chiefly for storage purposes. The evidence from the thyroidectomized larvae indicates, Swingle adds, that the animal body is capable of utilizing iodin directly without the intermediation of the gland. It is admittedly little more than speculation to transfer the observations on the development of these lowly forms to the problems of thyroid function in man. They are not entirely incompatible with the view that, so far as iodin is concerned, the chief function of the thyroid is one of storage. However, it seems more than likely at present that the unique organic combinations of the element obtainable from the gland are far more potent in their effect on metabolism than are the simple salts of iodin. Whether, therefore, iodin functions best through the intermediation of the glands whereby its potency is augmented remains to be considered.

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[1] Kendall, E. C.: The Active Constituent of the Thyroid, J. A. M. A. **71**: 871 (Sept. 14) 1918.

[2] Swingle, W. W.: Studies on the Relation of Iodin to the Thyroid, I, The Effects of Feeding Iodin to Normal and Thyroidectomized Tadpoles, J. Exper. Zool. **27**: 397, 1919.

[3] Allen, B. M.: J. Exper. Zool. **24**, No. 3, 1918.

TRANSITORY ALBUMINURIA

Albuminuria is a symptom that is by no means necessarily indicative of a permanent defect of the renal function. Ordinarily the proteins of the blood do not obtain entrance into the tubules of the kidneys; but it happens occasionally that albumin is found in the urine of persons in whom there is no occasion to suspect the existence of an acute nephritis. This is particularly true after strenuous exercise. Athletes and others performing severe muscular exercise not infrequently give evidence of a temporary albuminuria. Again, there are persons who excrete protein whenever and only when they assume an upright position. This phenomenon, long known under the designation of orthostatic or postural albuminuria, commonly disappears after a time, and in any event must be clearly differentiated from what is observed in true nephritis. There has been considerable speculation from time to time as to the cause of the transitory or "physiologic" types of albuminuria. For the postural forms there is reason to assume that they are the outcome of circulatory changes in the kidneys. Thus the vasomotor reactions and tonus of some persons on standing in an upright position are not as effective as in the average individual, so that venous congestion may occur to some extent in the abdominal viscera. Excretion of protein follows as a consequence; and it disappears as soon as normal circulatory conditions are reestablished. In the case of strenuous muscular exercise, such an explanation is not adequate. There is greater probability of a tendency toward an anemia than a congestion of the renal structures; yet albumin may appear. Bornstein and Lippmann[1] point out that products of vigorous metabolism bring an added factor to bear in this type of transitory albuminurias. In observations on persons engaged in heavy marching, as well as on swimmers, they noted a striking parallelism between the excretion of albumin and the acidity of the urine. The frequency of occurrence of cylindroids also seemed to be related in a similar manner to the concentration of urinary acid. Furthermore, both phenomena of severe exertion—albuminuria and cylindroid formation—were checked by the administration of alkali during the working period. This is not the first time that acidity and albuminuria have been brought into causal relationship in discussions of abnormal kidney function. We shall not discuss the debated question at this time. The preceding comments are intended primarily to point out that so-called physiologic or transitory albuminurias may arise under conditions in which the circulatory manifestations are quite unlike. Nevertheless they may still be outside the realm of the definitely pathologic.

AN EYE TO BUSINESS

A Chicago physician recently received a circular letter from Arntzen, Inc., of the same city. The letter advises that the directors of the corporation have "decided to invite a few more physicians to become stockholders in the Arntzen Corporation." It alleges that this company has "now about one hundred Doctors with us in our work who are thoroughly satisfied with The Arntzen Way." The names of the one hundred are not given. Every physician solicited "will be limited to ten shares or $100." The benefits to be derived (by the physician) from this investment are—still relying on the letter—a "very handsome dividend," to say nothing of the fact that the stock may be used by the physician at its face value to apply on goods purchased from Arntzen, Inc., for his own family or for that of any friend. "This stock," continues the letter, "is to be sold to the Physicians without the knowledge of anyone. This is your business and ours. Every transaction will be absolutely of a confidential nature." The nub of the proposition seems to be the fact that on each bill of goods purchased "in any way through the holder of said certificate of stock, there will be a Ten Per Cent. discount given to the holder of ten shares or $100 of stock." Arntzen, Inc., it should be said, are undertakers; their slogan: "Funerals to Suit Any Purse."

"THE GROUND GLASS OBSESSION"

Obsessions of hidden danger from ground glass in food are likely to spring up in the future as has happened occasionally in the past. It may be worth while to revert again to the subject[1] by calling attention to some analyses of products that were alleged to contain ground glass. In thirty-one out of forty instances of food and glass phobia, analysts investigated the accused products rather than rumors. Ground or powdered glass chiefly had been suspected. The Connecticut Agricultural Experiment Station[2] at New Haven found no evidence of glass in the samples submitted. Silica (or sand), which is widely distributed in foods of

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[1] Bornstein, A., and Lippmann, A.: Weitere Beiträge zur nichtnephritischen Albuminurie, Ztschr. f. klin. Med. 86: 345, 1918.

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[1] The Ground Glass Obsession, Current Comment, J. A. M. A. 70: 852 (March 23) 1918.

[2] Bailey, E. M.: The Twenty-Third Report on Food Products and the Eleventh Report on Drug Products, 1918, Conn. Agric. Exper. Station, Bull. 210, 1919, p. 229.

vegetable origin, and crystallized sugar were the substances chiefly responsible for the alarm in these cases. In three instances, one of which was evidently a case of sabotage, glass was detected. Here no analysis was necessary as the large fragments represented a proportion of 2½ ounces per pound of the canned beef under suspicion. In some instances the occasion for the false assumption of the presence of glass is easily traced. The ash of any vegetable matter contains substances which are like glass in kind and quality and are familiar as silica or sand. Moreover, particles of siliceous material in vegetable ashes often show sharp and jagged edges when viewed under the microscope. Fortunately ground glass is scarcely more injurious than are other coarse particles which are frequently swallowed with impunity. This was well realized by Dr. Thomas Brown[3] in the seventeenth century, from whose writings Bailey[2] has extracted the following interesting comment:

> That ground glass is poyson according unto common conceit I know not how to grant. Not only from the innocency of its ingredients, that is, fine sand, and the ashes of glasswort of fearn, which, in themselves are harmless and useful; or because, I find it by many commended for the stone; but also from experience, as having given unto dogs above a dram thereof, subtilly powdered in butter or paste, without any visible disturbance.

Medical Mobilization and the War

Personnel of the Medical Department

For the week ending June 20, there were 13,465 officers in the Medical Corps, a decrease of 466 from the previous week. The Medical Reserve Corps contained 2,494 officers. The total number of physicians discharged since the beginning of the war is 18,699. The records of the discharge branch of the general staff show the following discharges of officers of the Medical Department from Nov. 15, 1918, to noon, June 19, 1919: 1 brigadier-general, 53 colonels, 385 lieutenant-colonels, 1,892 majors, 7,719 captains, 9,714 lieutenants, making a total of 19,764 officers discharged to date. Nov. 15, 1918, there were 30,591 medical officers on duty; June 19, 1919, there were 10,827 officers on duty in the Medical Corps.

Personal News of the Services

William B. Banister, Col., M. C., U. S. Army, department surgeon, Central Department, Chicago, has been notified that the French government will soon confer on him its decoration of Legion of Honor. Colonel Banister, while in France, was commanding officer of the hospital center at Limoges, which included Base Hospital No. 13, the Presbyterian and Cook County Hospital Unit, Chicago, and Hospitals No. 24 and No. 28, of Kansas City, Mo., and also was commanding officer of Convalescent Unit No. 5, which cared for more than 23,000 patients.——Major M. August W. Shockley, Col., M. C., U. S. Army, has returned, after seventeen months' service overseas, to resume his work as head of the medical department of the Army Service School, Fort Leavenworth, Kan.——Robert M. Culler, Col., M. C., U. S. Army, recently returned from France, has been appointed to command the Army and Navy General Hospital, Hot Springs, Ark., succeeding Charles M. Gandy, Col., M. C., U. S. Army, who has been made department surgeon of the Eastern Department.——Homer Folks, New York City, director of the department of civil affairs of the Red Cross in France, formerly secretary of the New York State Charities Aid Association, who has been abroad since July, 1917, has returned home.——Henry I. Raymond, Col., M. C., U. S. Army, department surgeon headquarters, Central Department, was retired from active service, May 24, after more than thirty-seven years' continuous military duty.——Allen D. Lazenby, Capt., M. C., U. S. Army, was retired from active service, June 3, after disability incident to service.——Howard H. Johnson, Col., M. C., U. S. Army, who has been on duty at Newport News, Va., has been ordered to command Army General Hospital No. 21, Denver.——Arthur W. Dunbar, Capt., M. C., U. S. Navy, has recently been placed in command of the Hospital Ship *Mercy*.——John O. Skinner, Major, M. C., U. S. Army, retired, who resigned as superintendent of the Columbia Hospital, Washington, D. C., who returned to active duty during the war, has accepted the position of superintendent of the Emergency Hospital, Washington, D. C.——Merritte W. Ireland, Major-General, M. C., U. S. Army, was given the degree of doctor of laws, by Jefferson Medical College at the commencement exercises.——At the meeting for organization of the Air Service Association, June 13, in Atlantic City, N. J., Dr. John O. McReynolds, Dallas, Texas, was elected president.——Surg.-Gen. Merritte W. Ireland, U. S. Army, was advised, June 10, that the British government has conferred on him the cross of the Companion of the Bath as chief surgeon of the American Expeditionary Forces and later as Surgeon-General of the Army.——Robert E. Noble, Major-General, M. C., U. S. Army, who, it was rumored, had been sent into Belgium as section surgeon of the new service of supplies section organized there, has not been assigned to this duty but is still stationed at Brest, France.

HONORABLE DISCHARGES, MEDICAL CORPS, U. S. ARMY

Note.—In the following list L signifies lieutenant; C., captain; M., Major; L. C., lieutenant-colonel, and Col., colonel.

ALABAMA

Auburn—Kimbell, I. (M.)
Belle Mina—Pettus, J. J. (C.)
Ensley—Kent, J. T. (C.)
Kellyton—Culberson, A. E. (L.)
Mount Vernon—Moorer, M. L. (L.)

ARKANSAS

Walnut Ridge—Swindle, J. C. (L.)

CALIFORNIA

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Berkeley—Sawyer, W. A. (M.)
Carmel—Whitne, J. L. (M.)
Fort Bragg—Gregory, L. C. (C.)
Los Angeles—Butler, O. W. (L.)
Hart, T. M. (L.)
Pyles, R. H. (C.)
Swancott, J. (L.)
McFarland—Blood, J. N. (L.)
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Palo Alto—Mudd, J. L. (L.)
Sacramento—Barnard, H. D. (L.)
Higgins, A. F. (C.)
San Francisco — Cleary, E. W. (M.)
Cohn, H. J. (C.)
Craig, C. A. (L.)
Hoffman, H. V. (C.)
Von Der Leith, H. O. (C.)

COLORADO

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Denver—Farnsworth, H. E. (L.)
McGraw, H. R. (C.)
Idaho Springs—Atcheson, J., Jr. (C.)

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Bristol—Scott, W. J. (L.)
Hartford—Wilson, F. E. (C.)
New Haven—Cobey, J. F. (C.)
Yudkin, A. M. (L.)
Wallingford — McGaughey, J. D. (M.)
Waterbury—Dye, J. S. (L. C.)

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Sawtelle, H. F. (M.)

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Jacksonville—Barfield, F. G. (L. C.)
Ocala—Dozier, H. C. (C.)
Watt, H. F. (C.)

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Augusta—Robertson, J. R. (C.)
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Columbus—Blanchard, M. (L.)
Cuthbert—Crook, W. W. (C.)
Milledgeville — Clayton, M. D. (L.)
Rutledge—Gambrell, G. C. (L.)
Savannah—Harris, R. V. (C.)
Waring, A. J. (C.)
Waycross—Carswell, H. J. (L.)
Willacoochee—Corbitt, H. (M.)
Gillespie, S. B. (C.)

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Pocatello—Roberts, E. N. (L.)

ILLINOIS

Bloomington—Bath, T. W. (C.)
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Cipriani, J. B., Jr. (L.)
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Klemptner, D. (L.)
La Mothe, E. (C.)
Leseman, F. J. (C.)
McGuire, M. F. (L.)
Oliver, E. A. (C.)
Schram, D. L. (C.)
Evanston—Hedborg, D. L. (C.)
Tiskilwa—Horner, C. F. (C.)
Winnetka—Bodman, E. W. (L.)

INDIANA

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Jasper—Casper, J. F. (L.)
Napoleon—Heath, E. E. (L.)
Newport—Saunders, J. L. (M.)
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IOWA

Cedar Falls—Hearst, W. L. (C.)
Cedar Rapids—Redmond, W. H. (L.)
Council Bluffs—Macrae, D., Jr. (Col.)
Des Moines — Holbrook, F. R. (C.)
Fort Dodge—Kersten, P. E. M. (L.)
Keokuk—Fuller, F. M. (C.)
Lenox—Huff, L. D. (C.)
Macksburg—Pindell, M. L. (L.)
Rockwell City—Hoit, J. N. (C.)
Templeton—Morganthaler, O. P. (C.)

KANSAS

Kansas City—Wilkinson, H. (M.)
Morgan—Simpson, L. I. (C.)
Olathe—Parker, C. A. (C.)
Topeka—Cook, J. D. (C.)
Lerrigo, C. H. (M.)

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3. Brown, Thomas: Pseudodoxia Epidemica, printed for the assigns of Edward Dod, London, 1669.

KENTUCKY

Fort Thomas — Hohnstedt, J. H. (C.)
Hardyville—Weldon, W. A. (C.)
Trenton—Gower, C. M. (C.)

LOUISIANA

Monroe—Wright, G. W. (L.)
New Orleans — Menendez, J. C. (L.)

MAINE

Cottonwood — Robertson, J. B. (C.)
Winter Harbor—Bragg, J. S. (C.)

MARYLAND

Baltimore—McClure, R. D. (M.)
Reik, H. O. (L. C.)

MASSACHUSETTS

Belmont—Leavitt, F. C. (C.)
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Harmer, T. W. (M.)
Marble, H. C. (L.)
Moulton, A. T. (L.)
Savage, J. C. (C.)
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Brookline—Higgen, F. H. (C.)
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Fitchburg—LaFortune, W. T. (L.)
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Holyoke—Hughes, E. H. (L.)
Lowell—Gardner, A. R. (L.)
Mansfield—Lathan, B. M. (C.)
Norwood—Fenton, A. A. (C.)
Springfield—Burke, G. H. (L. C.)
Donovan, W. J. (L.)
Westport—Burt, E. W. (C.)
Woburn—Caulfield, T. E. (C.)
Worcester—Bolduc, A. G. (C.)

MICHIGAN

Ann Arbor—Gates, J. L. (C.)
Ruedemann, R. H. (L.)
Birmingham — Campbell, L. G. (L.)
Detroit—Broderick, F. B. (C.)
Pratt, J. P. (C.)
East Grand Rapids—Currior, F. P. (C.)
Grand Rapids — Martin, A. M. (C.)
Sevey, L. E. (C.)
Smith, R. R. (L. C.)
Henderson—Amos, T. G. (L.)
Lakeview—Kelsey, L. E. (C.)
Marshall—Niles, W. H. (L.)
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Muskegon—Morford, F. N. (L.)
Saginaw—Leitch, A. E. (C.)

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Kimball—Frisch, F. P. (L.)
Minneapolis—Johnson, R. A. (L.)
Lee, J. W. (C.)
Preston, P. J. (C.)
Preston—Detuneq, A. E., Jr. (C.)
Rochester—Blanco, P. (L.)
St. Paul—Hullsick, H. E. (L.)

MISSISSIPPI

Cockrum—Moore, D. R. (C.)
Greenville — Montgomery, D. C. (L.)
Lexington—Ash, G. G. (C.)
Michigan City — Withers, E. Q. (C.)

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Chaffee—Finney, W. O. (L.)
Fulton—Spence, E. L. (L.)
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Dugay, H. W. (L.)
Keota—Edwards, F. T. (L.)
Leeton—Pare, E. Y. (L.)
St. Genevieve — Birsner, L. J. (C.)
St. Louis—Allison, N. (Col.)
Rehfeldt, C. S. (C.)
Stewart, J. W. (L.)
Thompson, A. M. (L.)
Washington—Rothman, H. L. (L.)

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Intake—McDowell, J. R. (L.)

NEBRASKA

Hastings—Hopkins, S. R. (M.)
Ingleside—Leisure, J. S. (L.)
Lincoln—Lockwood, I. H. (C.)
Orr, H. W. (L. C.)
Omaha—Hanisch, L. E. (C.)
Hench, J. M. (M.)
Rising City—Vanderhoof, T. J. (L.)

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Colebrook—Barbour, W. L. (L.)
Concord—Graves, R. J. (M.)
Nashua—Nutter, C. F. (C.)
North Walpole — Liston, A. C. (L.)

NEW JERSEY

Atlantic City—Alsop, T. (C.)
Quinn, N. J. (L.)
Shivers, C. H. D. (C.)
Bogota—McFeely, P. R. (L.)
Bridgeton—Westcott, H. F. (L.)
Camden—Deibert, I. E. (L.)
Lewis, T. K. (C.)
Hoboken—Lewis, L. L. (C.)
Jersey City—Blumberg, J. (M.)
Broderick, J. J. (M.)
McLoughlin, F. J. (L.)
Sulouff, S. H. (C.)
Lakewood—Disbrow, H. B. (C.)
Red Bank—Rafferty, P. P. (M.)
Roselle—Griesemer, Z. L. (M.)
Secaucus—Ingber, I. S. (L.)
Summit—Bates, C. (C.)
Union Hill—Kothe, O. (L.)

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Baldwin—McChesney, J. W. (L.)
Bedford—Coopernail, G. P. (M.)
Brooklyn—Brown, F. E. (M.)
Butler, G. R. (L. C.)
Ebeling, W. B. (L.)
Golding, J. E. (C.)
Grossman, A. (L.)
Horni, J. (C.)
Simrell, G. W. (C.)
Buffalo—Moscato, V. C. (L.)
Ostrow, W. (C.)
Geneva—Maloney, T. W. (M.)
Ilion—Leonard, F. J. (L.)
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Cilley, A. H. (L. C.)
Dingman, N. M. (L.)
Downes, W. A. (M.)
Dunham, E. K. (M.)
Du Puy, H. B. (L.)
Egle, E. P. (C.)
Falk, H. C. (L.)
Farnan, T. (C.)
Getman, J. E. (L.)
Gillette, J. F. (C.)
Heine, J. (L.)
Kully, B. M. (L.)
Moschowitz, A. V. (L. C.)
Sabine, P. S. (C.)
Sullivan, T. F. X. (C.)
Oswego—Ringland, J. B. (C.)
Rochester—Jewett, D. B. (C.)
Schenectady—Warner, A. L. (M.)
Thiells—Little, C. S. (C.)
Wellsville—McCarty, F. E. (L.)
Westbury—Silliman, G. S. (C.)
Williamsville—Huver, H. B. (C.)

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Ellington, A. J. (C.)
Wilkerson, T. E. (C.)
Raynham—Lowry, J. A. B. (C.)
Winston-Salem—Salmons, L. (L.)

NORTH DAKOTA

Bisbee—Swenson, A. W. (C.)

OHIO

Akron—Wharton, C. F. (L.)
Alliance—Tressel, J. K. (C.)
Bradford—Warvel, J. H. (L.)
Centerville—Slagle, C. D. (C.)
Cincinnati—Keller, N. H. (L.)
Kiser, A. E. (L.)
Knoop, E. T. (C.)
Cleveland—Avellone, J. C. (C.)
Reeve, G. H. (L.)
Freemont—Philo, D. W. (C.)
Kingston—Lightner, R. E. (C.)
Marion—Altmaier, C. J. (L.)
Steubenville—Biddle, V. (C.)
Urbana—Moore, D. H. (L.)
West Cairo—Hauman, L. H. (L.)
Youngstown — Sherbondy, J. A. (L. C.)

OKLAHOMA

Bartlesville—Bradfield, S. J. (C.)
Pryor—Puckett, C. (C.)
Stillwater—Sexton, C. E. (L.)
Wilburton—Kilpatrick, G. A. (L.)
Woodville—Rutledge, J. A. (C.)

OREGON

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Portland—Brill, I. C. (L.)
Campbell, W. M. (C.)
Gullette, F. (C.)
McGusker, C. J. (C.)
Rosenfeld, A. S. (L.)

PENNSYLVANIA

[illegible] (L.)
[illegible])
[illegible] C.)
[illegible], W. L. (C.)
Easton—Hoey, R. H. (L.)
McKeesport—Heisey, W. C. (C.)
Humes, J. F. (C.)
Media—Parsons, I. I. (C.)
New Freedom—Bowers, S. C. (C.)
New Kensington—Krieger, G. L. (C.)
Old Forge—Loftus, J. L. (C.)
Philadelphia—Dillard, H. K. (M.)
Ellis, W. T. (C.)
Gittings, J. C. (L. C.)
Gummey, F. B. (C.)
Morton, D. J. (L.)
Moyer, D. G. (L.)
Pemberton, R. (M.)
Smith, S. C. (M.)
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Fenollosa, S. K. (M.)
Fisher, J. W. (L.)
Hill, C. A. (C.)
Jackson, E. C. (M.)
Seipel, J. H. (L.)
Sherrill, A. W. (C.)
Sharon—Moses, C. H. (L.)
O'Brien, A. M. (C.)
South Bethlehem — Timmons, N. A. (L.)
[illegible] J. E. (L.)
[illegible] C. S. (C.)
[illegible] H. W. (C.)
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Sargent, L. D. (C.)
Waverly—Mackey, R. B. (C.)
Whitney—Katherman, F. C. (C.)
Williamsport—Harley, J. P. (L.)
York—Weaver, L. S. (L.)

RHODE ISLAND

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Liberty—Smith, C. W. (C.)
Northville—Bates, W. A. (C.)

TENNESSEE

Centerville — Edwards, W. K. (C.)
Eads—McConathy, G. W. (L.)
Memphis—Abernathy, A. S. (C.)
Brinson, S. N. (C.)
Wright, B. B. (L.)

TEXAS

Ambrose—Price, C. G. (L.)
Floresville—Blake, J. V. (C.)
San Antonio—Ogilvie, H. H. (C.)

UTAH

Salt Lake City — Curtis, F. J. (L.)
Sprague, H. B. (C.)

VERMONT

Danville—Libbey, C. E. (C.)
Rutland—Smith, R. E. (C.)
Stickney, W. (M.)

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Raccoon Ford—Mundy, J. O., Jr. (C.)
Richmond—Fitzgerald, R. S. (C.)
McGuire, J. (M.)

WASHINGTON

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Seattle—Buckner, H. T. (L.)
Renfro, L. W. (C.)
Tacoma—Read, W. D. (C.)

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Huntington—Hicks, J. O. (C.)

WISCONSIN

Rhinelander—Schiek, I. E. (C.)
Stevens Point — Smiley, R. B. (L.)

WYOMING

Lander—Smith, W. F. (M.)
Laramie—Markley, J. P. (C.)
Lusk—Dale, E. E. (L.)

MEDICAL OFFICERS, U. S. NAVY, RELIEVED FROM ACTIVE DUTY

CALIFORNIA

San Francisco—Minaker, A. J.

INDIANA

Indianapolis—Rinker, E. B.

IOWA

Burlington—Crow, G. B.

KENTUCKY

Lexington—Alexander, P. M.

MARYLAND

Baltimore—Knorr, E. A.

MASSACHUSETTS

Boston—Shay, C. E.
Chelsea—Otis, I. S.
Pond, D.

MICHIGAN

Detroit—Crandell, C. H.

MINNESOTA

Minneapolis—Kalin, O. T.
New Richland—Sybibrud, H. W.

MISSOURI

Kansas City—Porter, A. L.
St. Louis—Barnwell, R.

MONTANA

Forestgrove—Jongewaard, A. J.

NEW YORK

Brooklyn—Carey, J. J. M.
Buffalo—Case, O. J.
New Rochelle—Morrison, E. T.
New York—Evans, A. P.
Leake, W. H.
Leddy, R. C.
Lewis, R. W.

NORTH CAROLINA

Asheville—Greene, J. B.

OHIO

Albany—Goldsberry, B. R.
Hartville—Willams, A. E.

OREGON

Astoria—Gaston, I. E.
Portland—Steinmetz, E. P.

PENNSYLVANIA

Ardmore—McIver, J.
Philadelphia—Fries, C. J. V., Jr.
Sample, R. C.

RHODE ISLAND

Providence—Hammond, R.
Westcott, C. S.

TEXAS

Cumby—Ward, E.
Hillsboro—Barcus, W. S.

WASHINGTON

Bremerton—Tinney, C. M.

WEST VIRGINIA

Alpoca—Sanders, J. A.
Eccles—Griff, A. H.

WISCONSIN

Racine—Hemmingsen, T. C.

ORDERS TO OFFICERS OF THE MEDICAL CORPS, U. S. ARMY

Alabama

To Camp Jackson, S. C., from Fort Riley, Lieut. A. A. THURLOW, Cullman.

To Camp Zachary Taylor, Ky., base hospital, from Camp Dix, Major A. L. GLAZE, Jr., Athens.

California

To Army Medical School for instruction, from East View, Lieut. L. O. W. MOORE, Alameda.

To Camp Lewis, Wash., from Camp Upton, Major H. W. SEAGER, Los Angeles.

To Fox Hills, N. Y., from Camp Dix, Lieut. W. E. KAY, Jr., San Francisco.

To report to the commanding general, American Expeditionary Forces, from Camp Kearney, Lieut.-Col. H. P. CARTER.

To report to the commanding general, Western Department, from Camp Dix, Capts. C. B. ADAMS, Los Angeles; W. C. CHILSON, Tulare.

Colorado

To Lake Charles, La., Gerstner Field, from Houston, Lieut. W. G. MUDD, Denver.

Connecticut

To New Haven, Conn., from Chicago, Major L. W. BACON, New Haven.

To Pittsburgh, Pa., from Boston, Lieut. T. L. STORY, Hartford.

To Walter Reed General Hospital, D. C., from New Haven, Major J. B. HENNEBERGER.

Delaware

To Report to the Commanding General, Eastern Department, from Cape May, Major G. I. McKELWAY, Dover.

District of Columbia

To Fort Caswell, N. C., from Surgeon-General's Office, Col. C. E. MARROW.

To Fort McHenry, Md., from Philadelphia, Lieut.-Col. J. M. HELLER, Washington.

To Fort Myer, Va., from Surgeon-General's Office, Col. P. W. HUNTINGTON.

To Fort Sheridan, Ill., from Walter Reed General Hospital, Lieut.-Col. L. J. OWEN.

To Fox Hills, N. Y., from Camp Dix, Lieut. F. M. NOLAN, Washington.

To Hoboken, N. J., Capt. J. E. CAMPBELL, Washington.

To Report to the Commanding General, Northeastern Department, from Fort Schuyler, Capt. H. W. BARKER, Washington.

To San Francisco, Calif., Letterman General Hospital, from Walter Reed General Hospital, Col. R. M. THORNBURGH.

To Walter Reed General Hospital, D. C., from Army Medical School, Major R. W. WHITTIER.

To Washington, D. C., Surgeon-General's Office, from Hoboken, Col. W. D. WEBB, Washington.

To Washington Barracks, D. C., from Camp Dix, Lieut.-Col. J. G. McKAY, Washington.

Florida

To Camp Jackson, S. C., From Fort Riley, Capt. O. W. KING, Sanford.

To Plattsburg Barracks, N. Y., from Boston, Capt. W. A. CLARK, Pine Barrin.

To Spartanburg, S. C., from Camp Dix, Capt. D. B. WILLIAMS, Lake City.

Georgia

To Camp Dix, N. J., from Lakewood, Lieut. C. H. SULLIVAN, Zebulon.

To Camp Howard, Md., from Camp Gordon, Col. F. T. WOODBURY.

To Fort McPherson, Ga., from Camp Gordon, Major F. W. McRAE, Jr., Atlanta; from Fort Oglethorpe, Lieut.-Col. C. D. COWLES, Jr.

To Fort Thomas, Ky., from Camp Sherman, Lieut. D. D. WALKER, Macon.

To report to the commanding general, American Expeditionary Forces, from Fort Oglethorpe, Lieut.-Col. H. H. RUTHERFORD.

Illinois

To Army Medical School for instruction, from Camp Devens, Lieut. T. S. McCLANAHAN, Chicago.

To Camp Lewis, Wash., from Camp Zachary Taylor, Lieut. G. W. McCRARY, Chicago.

To Denver, Colo., from Camp Dix, Capt. A. K. BROWN, Chicago; from Camp Grant, Capt. M. F. GEEHAN, Chicago.

To Fort Des Moines, Iowa, from Chicago, Capt. J. H. BRYANT, Galesburg; Lieut. C. M. DeBECK, Chicago.

To Fort Riley, base hospital, from Chicago, Lieut. J. D. ELLIS, Chicago.

To Fort Sheridan, Ill., from Camp Dix, Major C. R. G. FORRESTER, Chicago; from Camp Grant, Capt. J. T. DEGAN, Chicago.

To Fox Hills, N. Y., from Camp Dix, Major G. G. DAVIS, Chicago.

To Report to the Commanding General, American Expeditionary Forces, from Camp Grant, Major S. R. NORRIS. Central Department, from Camp Dix, Capt. L. L. BRODSKY, Chicago. Hawaiian Department, from Camp Grant, Major R. R. B. JACKS, Highwood. Southern Department, from Chicago, Lieut. C. L. GARRIS, Eldorado.

To San Diego, Calif., from San Antonio, Capt. H. E. MIZE, Chicago.

To Whipple Barracks, Ariz., from Camp Zachary Taylor, Major C. L. MOIR, Chicago.

Indiana

To Camp Zachary Taylor, Ky., base hospital, from Camp Shelby, Major C. R. SOWDER, Indianapolis.

To Fort Sheridan, Ill., from Camp Dix, Capt. H. W. NIMAL, Indianapolis.

To Fort Thomas, Ky., from Fort Benjamin Harrison, Capt. H. H. MARTIN, LaPorte.

To Washington, D. C., from Saltville, Va., Lieut. R. E. SWOPE, Rockville.

The following order has been revoked: *To Detroit, Mich.*, from Camp Zachary Taylor, Capt. L. H. REDMAN, Elizabeth.

Iowa

To Fort Des Moines, Iowa, from Camp Dix, Major E. S. PARKER, Ida Grove.

Kansas

To New York City for instruction, and on completion *to his proper station*, from Fort Riley, Lieut. W. W. REED, Blue Rapids.

Kentucky

To Army Medical School for instruction, from Camp Zachary Taylor, Lieut. F. V. KILGORE, Louisville.

To Camp Dix, N. J., base hospital, from Camp Zachary Taylor, Capt. O. R. MILLER, Louisville.

To Camp Jackson, S. C., from Fort Oglethorpe, Lieut. L. O. PINDAR, Tyrons.

To Camp Sherman, Ohio, from East View, Major M. C. PENTZ, Nicholasville.

To Camp Zachary Taylor, Ky., from Camp Dix, Capt J. W. McPHEETERS, Columbus.

To Fort Leavenworth, Kan., from Fort Riley, Lieut. C. B. NEIDHAMER, Sturgis.

To Fort Snelling, Minn., from Camp Dix, Capt. O. E. BLOCH, Louisville.

To Plattsburg Barracks, N. Y., from Camp Devens, Lieut. T. D. MOORE, Hopkinsville.

To report to the commanding general, Southern Department, from Camp Sheridan, Capt. H. S. CHASE, Junction City.

Louisiana

To Camp Dix, N. J., from Camp Travis, Lieut. H. B. SEEBOLD, New Orleans.

To Camp Upton, N. Y., Camp Surgeon's Office, Capt. R. H. FISHER, Sulphur.

To Fort McPherson, Ga., from Camp Dix, Major W. M. PERKINS, New Orleans.

Maryland

To Camp Meade, Md., from Camp Dix, Lieut. G. PETERSON, Wallville.

To Fort McHenry, Md., from Camp Dix, Lieut.-Col A. C. GILLIS, Baltimore; from Camp Meade, Capt. W. H. [illegible] from Surgeon-General's Office, Lieut. A. W. RE[illegible]

To Walter Reed General Hospital, D. C., from Camp Meade, Lieut. R. K. FOXWELL, Cambridge.

Massachusetts

To Army Medical School for instruction, from Boston, Lieut. A. G. C. SCHNACK, Boston.

To Camp Devens, Mass., from Camp Dix, Capt. F. A. SIMONDS, Cambridge.

To Camp Meade, Md., base hospital, from East Norfolk, Lieut.-Col. W. H. SMITH.

To Fort McPherson, Ga., from Camp Lee, Lieut. F. B. M. CADY, Cambridge.

To Hampton, Va., from East Norfolk, Capt. R. G. PROVOST, New Bedford.

To Mineola, N. Y., Hazelhurst Field, from Boston, Lieut. F. H. THORNE.

To Platts[illegible] from Boston, Lieuts. C. W. PEABODY, L. [illegible]

To report [illegible] *general*, Eastern Department, from Camp Dix, Major E. A. KNOWLES, Medford. Northeastern Department, from Boston, Capt. J. J. STACK, Boston.

To Spartanburg, S. C., from Camp Dix, Capt. B. A. GODVIN, Boston.

To Walter Reed General Hospital, D. C., from Boston, Capt. J. B. MONTGOMERY; from East Norfolk, Lieut. T. E. BUCKMAN, Boston.

Michigan

To Fort Banks, Mass., from Boston, Lieut. H. L. KEIM, Ann Arbor.

To Pittsburgh, Pa., from Philadelphia, Capt. F. P. BENDER, Caro.

Minnesota

To Fort Des Moines, Iowa, from Chicago, Lieut. J. M. ARNSON, St. Paul.

Mississippi

To Hoboken, N. J., Capt. J. E. McDILL, Shaw.

To report to the commanding general, American Expeditionary Forces, from Camp Shelby, Lieut.-Col. J. F. JOHNSTON.

Missouri

To Army Medical School for instruction, from Camp Grant, Lieut. S. J. WOLFERMANN, St. Louis.

To Denver, Colo., from Fort Riley, Capt. S. E. HAYNES, St. Louis.

To Fort Bliss, Texas, from Camp Grant, Major E. H. BURGHER, St. Louis.

To Fort Riley, from Camp Dix, Capt. W. H. HILL, Kansas City.

To Jefferson Barracks, Mo., from St. Louis, Major F. J. TAINTER, St. Charles.

To Oteen, N. C., from Camp Lee, Lieut. B. F. HARRIS, Kansas City.

To Walter Reed General Hospital, D. C., from St. Louis, Lieut. D. P. McCORD.

Montana

To report to the [illegible] Western Department, from Camp Dix, Major T. [illegible], [illegible]tacey.

New Hampshire

To Detroit, Mich., from Chicago, Major G. C. WILKINS, Manchester.

To Plattsburg Barracks, N. Y., from Camp Devens, Lieut. J. C. LAWLOR, Dover; from Camp Dix, Capt. W. H. SQUIRES, Haverhill.

New Jersey

To Aberdeen, Md., from Camp Dix, Col. G. M. EKWURZEL.

To Camp Jackson, S. C., from Hoboken, Col. K. NELSON.

To Fort McPherson, Ga., from Fort Worth, Major F. W. PINNEO, Newark.

To Fort Oglethorpe, from Camp Dix, Col. G. M. Van POOLE.

To Fort Sam Houston, Texas, base hospital. from Hoboken, Col. G. A. SKINNER.

To Fort Schuyler, N. Y., from Camp Dix, Capt. W. E. McILVAINE, Hammonton.

To Fort Sill, Okla., from Hoboken, Col. L. P. WILLIAMSON.

To Fort Snelling, Minn., from Camp Dix, Capt. W. S. HOWARD.

To Fox Hills, N. Y., from Fort McHenry, Capt. W. J. SUMMERS, Boonton.

To Hampton, Va., from Fort Porter, Lieut. R. STEWART, Secaucus.

To report to the commanding general, Northestern Department, from Camp Dix, Col. J. L. BEVANS, Southern Department, from Camp Dix, Capt. E. E. GRIGGS, Haskell.

To Walter Reed General Hospital, D. C., from Camp Dix, Capts. J. R. JONES, J. A. P. MILLET; from Hoboken, Col. H. S. HANSELL, Lieut.-Col. R. W. BRYAN.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Cols. P. W. HUNTINGTON, P. L. JONES, Major C. K. BERLE; from Hoboken, Col. J. F. SILER.

For consultation, and on completion *to Fort Benjamin Harrison,* from Camp Dix, Col. P. L. FREEMAN.

New York

To Army Medical School from Camp Custer, Lieut. R. M. DeGRAFF, Buffalo; from Camp Upton, Lieuts. E. A. LANE, New York; J. J. HEMSTEAD, Waterford; from Hoboken, Capt. W. S. McCANN, New York.

To Camp Dix, N. J., base hospital, from Chicago, Major C. J. HUNT, Clifton Springs.

To Camp Jackson, S. C., from Camp Dix, Capt. J. K. CRANDALL, New York.

To Colonia, N. J., from Philadelphhia, Capt. C. W. FIELD, New York.

To East View, N. Y., from Philadelphia, Major C. A. SQUIRES, Binghamton.

To Fort McHenry, Md., from Pedricktown, Lieut. C. W. BROWN, Brooklyn.

To Fort McPherson, Ga., from Fort Oglethorpe, Lieut. J. J. FINIGAN, Lyons.

To Fort Sheridan, Ill., from Camp Dix, Capt. F. P. BREEZE, Elmira.

To Fox Hills, N. Y., from Fort McPherson, Lieut. M. H. HARRISON, New York.

To Hampton, Va., from Camp Dix, Capt. C. H. GOODRICH, Brooklyn; from East Norfolk, Lieut. P. L. DODGE, Poughkeepsie.

To Hoboken, N. J., Capt. J. C. HOEFFLER, Salamanca; from Camp Upton, Lieut. W. J. CARROLL, Brooklyn.

To New Haven, Conn., from Camp Devens, Lieut. L. FRISCHMAN, Yonkers.

To Plattsburg Barracks, N. Y., from Boston, Capt. C. E. E. PANNACI, Gloversville; from Chicago, Lieut. J. M. BLANK, Brooklyn; from Lakewood, Capt. R. S. TAYLOR, Buffalo.

To report to the commanding general, American Expeditionary Forces, from Camp Lee, Lieut. W. F. TOLSON, New York; from Camp Upton, Lieut. W. S. BENNETT, Glens Falls; from Fort Oglethorpe, Lieut. P. A. STEELE, New York. Eastern Department, from Fort Ontario, Major J. E. MALONEY, Ravenna.

To Williamsbridge, N. Y., from Fort Sheridan, Major R. N. SEVERANCE, Staten Island.

North Carolina

To Army Medical School for instruction, from Camp Lee, Lieut. J. W. CLARKSON, Hickory.

To New Haven, Conn., from Oteen, Capt. J. R. WILLIAMS, Asheville.

Ohio

To Army Medical School for instruction, from Camp Sherman, Lieut. V. R. TURNER, Newark; from Camp Zachary Taylor, Lieut. C. L. MAXWELL, Columbus.

To Camp Chester, Mich., from Camp Dix, Major W. W. CONGER, Toledo.

To Camp Dix, N. J., from Canal Zone, Capt. R. H. SILL, Cleveland.

To Camp Meade, Md., base hospital, from St. Louis, Major P. G. BORDEN, Massillon.

To Camp Sherman, Ohio, base hospital, from Surgeon-General's Office, Major N. P. McGAY, Cleveland.

To Colonia, N. J., from Williamsbridge, Lieut. R. G. MOSSMAN, Youngstown.

To Fort Benjamin Harrison, from Camp Grant, Lieut. H. P. TIMBERLAKE, Cleveland.

To Hoboken, N. J., Capt. B. H. NICHOLS, Ravenna.

To report to the commanding general, Hawaiian Department, from Camp A. A. Humphreys, Capt. H. S. HAYES, Whitehouse.

Oklahoma

To Fort McPherson, Ga., from Fort Oglethorpe, Capt. T. C. McCURDY, Purcell.

To Report to the Commanding General, American Expeditionary Forces, from Fort Sill, Col. F. W. PALMER.

Pennsylvania

To Army Medical School for instruction, from Camp Jackson, Lieut. P. S. SEABOLD, Philadelphia.

To Fort McHenry, Md., from Camp Dix, Major B. J. LONGWELL, Seminole.

To Fort McPherson, Ga., from Walter Reed General Hospital, Capt. P. B. STEELE, Pittsburgh.

To Hoboken, N. J., Capt. F. G. MURPHY, Philadelphia; Lieut. C. S. LONG, Colwyn; from Newport News, Major B. F. DUCKWALL, Pittsburgh.

To report to the commanding general, Eastern Department, from Fort D. A. Russell, Capt. F. H. McCASKEY.

Rhode Island

To Colonia, N. J., from Philadelphia, Lieut. E. W. MULLIGAN, Providence.

South Carolina

To Army Medical School, from Camp Dix, Major J. W. MOORE, McConnellsville.

To report to the commanding general, Southeastern Department, from Camp Dix, Capt. W. J. BURDELL, Lugoff.

South Dakota

To Walter Reed General Hospital, D. C., from Camp Grant, Capt. J. G. CHICHESTER, Redfield.

Tennessee

To Fort Sam Houston, Texas, base hospital, from Camp Dix, Lieut. C. A. SKELTON, Chattanooga.

To Jefferson Barracks, Mo., from Cape May, Capt. J. H. DYER, Wartrace.

Texas

To Army Medical School for instruction, from Brownsville, Lieut. L. L. HANDLEY, Houston.

To Brownsville, Texas, base hospital, from Chicago, Lieut. M. O. REA, Pottsville.

To Fort Logan, Colo., from Camp Dix, Major E. H. STARK, Paris.

To Fort Sam Houston, Texas, base hospital, from Camp Dodge, Lieut. L. G. THORNTON, West Point.

To Fort Sheridan, Ill., from Camp Bowie, Lieut.-Col. J. J. O'REILLY, Fort Worth.

To Fort Snelling, Minn., from Fort Sam Houston, Lieut.-Col. F. C. A. KELLAM, Jr.

To report to the commanding general, Southern Department, from Camp Dix, Lieuts. O. T. BUNDY, Hutto; J. F. STEIN, Denison.

Vermont

To Colonia, N. J., from Boston, Lieut. J. D. THOMAS, Pownal.

To Jefferson Barracks, Mo., from St. Louis, Lieut. C. A. LOFTIS, St. Albans.

Virginia

To Aberdeen, Md., from Camp Gordon, Major W. J. OLDS, Front Royal.

To Army Medical School, from Camp Dix, Capt. M. W. SINCLAIR, Hampton.

To Camp Jackson, S. C., from Camp Dix, Major A. W. GRAYES, Lacey Spring.

To Garden City, N. Y., from Philadelphia, Lieut. B. E. STRODE, Amherst.

To Hampton, Va., from Fort Porter, Lieut. G. G. HANKINS, Phoebus.

To report to the commanding general, American Expeditionary Forces, from Fort Monroe, Lieut.-Col. T. J. FLYNN.

To Whipple Barracks, Ariz., from Camp Lee, Capt. C. B. CRUTE, Farmville.

Washington

To report to the commanding general, Eastern Department, from Camp Upton, Capt. W. L. JACKSON, Burlington. Southern Department, from Fort D. A. Russell, Major S. Q. ELMORE, Pasco.

West Virginia

To Army Medical School for instruction, from Camp Zachary Taylor, Capt. L. A. PETTY, Charleston; Lieut. A. N. HENSON, South Charleston.

To Hoboken, N. J., from Camp Dix, Lieut. J. S. GIBSON, Holden.

To Oteen, N. C., from Biltmore, Capt. C. R. IRVING, Hansford.

Wisconsin

To Army Medical School, for instruction, from Camp Grant, Lieut. C. A. CIBELIUS, Racine.

To Jefferson Barracks, Mo., from St. Louis, Capt. C. O. LATHAM, Green Bay.

To report to the commanding general, Eastern Department, from Dover, Capt. P. L. SCANLON, Prairie Du Chien.

Wyoming

To report to the commanding general, Southern Department, from Camp Dix, Capt. D. A. WILLIAMS, Gebo.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

DISTRICT OF COLUMBIA

New Society Officers.—At the annual meeting of the George Washington University Medical Society, Dr. William J. Mallory was elected president; Dr. Daniel Le Ray Borden, vice president; Dr. Frank A. Hornaday, secretary, and Dr. Elijah W. Titus, treasurer.

Incorporates New Medical Society.—The incorporation of the Medical Society of the District of Columbia is provided for in a bill introduced by Congressman Lazaro of Louisiana, which empowers the society to own and convey real estate. It authorizes the following physicians to corporate themselves as a body corporate: George W. Cook, William G. Morgan, John B. Nichols, William P. Carr, Edward Y. Davidson, Philip S. Roy, Albert L. Stavely, Henry C. Macatee, Edward G. Siebert, J. Russell Verbrycke, Jr., Archie W. Boswell, Charles S. White, James A. Gannon, Hanson T. A. Lemon, Daniel S. Lamb and Virgil B. Jackson.

ILLINOIS

Graduate Lecture.—The fourth lecture of the Graduate Summer Course in Medical Science, in the University of Illinois, College of Medicine, Chicago, was delivered, June 25, by W. E. Burge, Ph.D., associate professor of physiology in the University of Illinois, Urbana, on "Catalase."

Alumni Meeting.—The annual meeting and dinner of the Alumni of the College of Medicine of the University of Illinois was held at Chicago, June 14, and the following officers were elected: president, Dr. Karl A. Meyer, '08; vice presidents, Drs. John W. Birk, '01, and Alexander W.

Burke, '09; secretary, Dr. John C. M. Krasa, '13; treasurer, Dr. Jay L. Armstrong, '04; member of the executive committee, Dr. Emory R. Hayhurst, '08, Columbus, Ohio, and alumni councilor, Dr. Robert W. Morris, '02.

New Officers of Chicago Medical Society.—At the annual election of the Chicago Medical Society, June 17, the following officers were elected: president-elect, Dr. Ludvig Hektoen; secretary, Dr. Hugh N. MacKechnie; councilors at large, Drs. Jacob C. Crafft, Charles J. Whalen, Samuel J. McNeill, G. Henry Mundt and Clarence B. King, and alternate councilors at large, Drs. John W. Davis, A. Charles Kubicek, Edward E. Reininger, Albert C. Hammett and William G. Alexander.

Personal.—Dr. Winfield Scott Hall, for more than twenty years a member of the faculty of Northwestern University Medical School, Chicago, has been appointed to take charge of the newly organized department of social hygiene of the Presbyterian Board of Temperance and Moral Welfare.——P. J. H. Farrell, Lieut.-Col., M. C., U. S. Army, Chicago, commanding Base Hospital No. 81, reached Newport News, June 16, after more than a year of service on the Western Front.——Dr. Arvid E. Kohler has been appointed city physician of Moline, succeeding Dr. Willis T. Hinman.——Emmett A. Garrett, Lieut.-Col., M. C., U. S. Army, formerly health commissioner of Peoria, who has been on duty overseas, arrived in New York, June 6.

INDIANA

New Medical School Building.—The new medical school building of Indiana University at Indianapolis will, it is announced, be completed and ready for occupancy by the opening of the school year in September. The reports that the entire medical course will be taught at Indianapolis are denied and the premedical courses will be given in Bloomington as before.

Personal.—During the recent meeting of the Mystic Shrine in Indianapolis the health committee was in charge of Dr. Walter S. Given; Dr. James H. Taylor, chief of the medical staff; Dr. Blanchard B. Pettijohn, chief of the surgical staff, and Samuel E. Earp, all of Indianapolis. Substations were also established at the principal hotels, at the fair grounds, and at the Shrine Temple.——Dr. Lester I. Ofner has resigned as superintendent of the Allan County Tuberculosis Sanatorium, near For Wayne, and has been succeeded by Dr. James A. Price of Macon, Ga.

IOWA

Clinic Building Completed.—The clinic building erected by Dr. Elmer E. Bamford at Centerville has just been completed. Dr. Bamford is to be the dental surgeon of the clinic; Dr. Virgil E. Dudman will have charge of the obstetric and gynecologic service; Dr. John I. Marker, internal medicine and the laboratory; Dr. Harvey E. Webb, bone and joint surgery, and Dr. Walter E. West will have charge of the business office. The building contains seventeen rooms, and is well equipped for practical and research work.

Incorrigible Consumptives.—The recent Iowa legislature passed a law: If any person afflicted with tuberculosis carelessly or maliciously expectorates the matter coughed up from his lungs, and after being warned refuses to protect others against the dangers of his infection, then on complaint filed in writing in the district court, the judge may commit such incorrigible consumptive to the state sanatorium, provided there is room, or to any county or private institution for tuberculosis for treatment. It is also provided that if a person afflicted with tuberculosis and under treatment at the state sanatorium or a county or private hospital for tuberculosis refuses to obey the rules and regulations governing such institution and is a general disturber, then, on complaint of the superintendent, the district court may authorize such person to be retained in a room or enclosure in such hospital until such person is willing to comply with the rules and regulations of the institution.

MASSACHUSETTS

Personal.—Walter E. Lang, Major, M. C., U. S. Army, Allentown, Pa., at present on duty at Debarkation Hospital No. 3, New York City, has been appointed superintendent of the Westboro State Hospital, succeeding Dr. Harry O. Spalding, Westboro, resigned.——Dr. Edward P. Worth, Edgartown, has been nominated medical examiner (coroner) for the third Dukes district to fill the vacancy.

Hospital Staff Appointed.—The staff of the Huntington Memorial Hospital, which will assume office, September 1, is as follows: surgeons, Drs. Robert B. Greenough, Channing C. Simmons and Edward H. Risley; assistant surgeon, Dr. George G. Smith; outpatients' surgeon, Dr. George A. Leland; consulting physicians, Drs. Henry A. Christian and Francis W. Peabody; physician, Dr. George R. Minot; laryngologist, Dr. Daniel C. Greene, and assistant physician, Dr. Arlie V. Bock.

Cancer Commission Appointed.—The Harvard Corporation has made the following appointments on the Harvard Cancer Commission: Dr. Robert B. Greenough, director, and Drs. Channing C. Simmons, secretary (both of Boston); Roger Pierce, treasurer; James H. Wright, Boston, pathologist; William Duane, research fellow in physics; William T. Bovie, research fellow in biology; Henry Lyman, Boston, research fellow in chemistry, and Ernest W. Goodpasture, Boston, research fellow in pathology.

Hospital News.—The Plymouth County Tuberculosis Hospital, South Hanson, erected at a cost of $250,000, was dedicated, May 31. The chief speakers were Dr. Eugene R. Kelley, Boston, state health commissioner, and Bernard W. Carey, Winthrop, of the state health department.——Bids have been invited for a hospital building in connection with the Charles Street jail. The proposed building will have on the ground floor the administration offices; the second floor will be for female inmates; the third floor for male inmates, and on the fourth floor will be the auditorium.

MONTANA

Personal.—Dr. Ira A. Leighton has been elected mayor of Boulder.

Health Board Building.—A building for the state board of health is to be erected on the capital grounds at Helena. The building will cost $50,000.

State Association Meeting.—The annual meeting of the Medical Association of Montana will be held in Missoula, July 9 and 10, under the presidency of Dr. Edward W. Spottswood, Missoula. Dr. Edward C. Rosenow of the Mayo Clinic, Rochester, Minn., will lead the discussion on influenza.

Hospital News.—Physicians of Sandstone met the need for a hospital in that district by converting the parish residence into a modern infirmary.——A new hospital is to be built at Harlowton.——Construction of the men's building at the State Hospital for the Insane, Warm Springs, to cost about $42,000 has been authorized by the state board of examiners.

NEW YORK

Conference of Sanitary Officers.—The eighteenth annual conference of sanitary officers, and the first annual conference of the public health nurses of the state of New York were held at Saratoga Springs, June 24 to 26, under the auspices of the New York State Department of Health, and under the presidency of Dr. Hermann M. Biggs, commissioner of health of New York.

New York City

New Building for Jamaica Hospital.—As a result of the success of the first two days' campaign in Queens County to raise $500,000 for the purpose of adding memorial wings to the Jamaica and St. Mary's hospitals, it has been announced that the Jamaica Hospital is to have a new building and that the location of the hospital will be changed to the vicinity of Woodhaven in order to distribute hospital facilities more evenly in Queens.

County Society Refuses to Act Under Health Insurance.—At the regular meeting of the Bronx County Medical Society, held April 16, resolutions were passed to the effect that it was the consensus of opinion of the members of that organization that every member should pledge himself not to act under any Health Insurance Act which might be passed and which had not the support of the Bronx County Medical Society. Cards have been sent to each member of the society requesting him to affix his signature to these resolutions.

Narcotic Drug Research Bureau Established.—In order to meet the acute problems that have arisen in connection with the increasing menace of drug addiction, a Bureau of Narcotic Drug Research has been established, with offices at 47 West Forty-Second Street. The purposes of this bureau are intelligently to study the situation, keep abreast of the times by collecting data both remedial and legislative, bearing on the problem, and to provide machinery by which this information can be disseminated through proper channels. The services of the bureau are at all times at the disposal of the physician, the medical press and the drug addicts. On file are numerous treatises on drug addiction prepared by authorities, together with the personal histories of a large number of addicts, all of which have been checked up in the minutest detail. Advice is given to the addict as to the best means of obtaining treatment. The bureau is under the executive management of A. R. Parkhurst, and its energies will be concentrated, for a time at least, on propaganda of an educational nature with the hope of arousing the physician to the necessity of studying narcotic drug addiction as a disease and not as a vice.

OHIO

Suits Decided.—In the case of W. G. Maney against Dr. Edward C. Banker, Akron, in which damages of $25,275 were claimed on allegation of malpractice in the operation for gallstones, the jury, June 4, returned a verdict in favor of Dr. Banker.——Dr. Moritz Loewenthal, Cleveland, is said to have been found guilty on eight counts of the illegal disposition of narcotics.

Personal.—Dr. Howard H. Smith, Bucyrus, has been appointed director of health of North Yakima, Wash.——Charles M. Hendricks, Major, M. C., U. S. Army, Eaton, has been promoted to the rank of lieutenant-colonel, M. C.——Charles T. Souther, Capt., M. C., U. S. Army, Cincinnati, was elected president of the Ohio branch of the National Pharmaceutical Service Association, May 20.——Dr. Elfie R. Graff, Glendale, Cincinnati, will shortly sail for her new professional duties in Turkey.——Dr. Horace M. Corns, Alliance, has been appointed resident physician in the medical service of Lakeside Hospital, Cleveland.——Dr. George R. Love, Toledo, for twenty years superintendent of the Toledo State Hospital, has resigned.

PENNSYLVANIA

Philadelphia

Personal.—At the meeting of the board of directors of the city trust Dr. Thomas B. Holloway was appointed to fill the vacancy created by the resignation of Dr. Joshua E. Sweet as attending surgeon at the Wills Eye Hospital. Dr. Orla J. Park was appointed resident surgeon, and a certificate of service was granted Dr. R. S. Pendexter in recognition of his faithful services as resident physician at that hospital.——Dr. Alexander C. Abbott, who recently returned from France, where he served with the Medical Corps of the U. S. Army, has been nominated for a position on the board of health. Dr. Frank C. Hammond, who was appointed to fill the vacancy insisted on resigning the post that Dr. Abbott might be reappointed to his former position.

Medicopsychologic Conference.—The Medico Psychological Association held a three day session at the Bellevue-Stratford Hotel, June 18, 19 and 20. Col. Thomas W. Salmon, M. C., from New York City, who was in charge of the neuropsychiatric division of the A. E. F., criticized the care of mental cases aboard transports. Col. Pearce Bailey of New York, who was in charge of the neuropsychiatric division in the Surgeon-General's Office in Washington, also spoke of the crowded ships, but in charts showing the cause of rejection in the army he pointed out that of the 67,417 rejections from neuropsychiatric causes, only 3 per cent. of this number, or fewer than 2,000, were drug addicts and fewer than 5 per cent. of the total army rejections were attributed to drugs and alcohol combined. The following officers were elected: Dr. Henry C. Eyman of Massillon, Ohio, president; Dr. Owen Copp, Philadelphia, vice president, and Dr. Harry W. Mitchell, Warren, Pa., secretary and treasurer.

TENNESSEE

Laboratory Building for Memphis College.—At a meeting of the board of trustees of the university of Tennessee held in Nashville, June 2, it was decided to spend $100,000 for a laboratory building for the medical department of the university, located in Memphis.

Hospital Notes.—The contract for the construction of the Fort Sanders Hospital, Knoxville, has been awarded. The founders of the institution are: Drs. Leon L. Sheddan, Louis A. Haun, John P. Tillery, Oliver W. Hill, Merk M. Copenhaver, John B. Thielen, and Edgar H. Ford, all of Knoxville. The building will accommodate sixty patients and will have special wards for obstetrics and the care of infants. It will cost $100,000. A charter has been applied for.

CANADA

Prescribing Liquor.—Physicians in Toronto, and other parts of Ontario, are now speculating as to what action the Ontario Medical Council will take with some fifty physicians in that city who, each in a month, have found it necessary to prescribe 200 quarts of whisky for their respective patients. It is said that in other cities physicians have been equally generous with the interpretation of the Ontario Temperance Act.

Personal.—Sir Arthur Newsholme gave a public address, Friday evening, June 20, in Convocation Hall, Toronto. The subject was: "Some Problems of Preventive Medicine of the Immediate Future." Sir Arthur was the guest of honor at a dinner given by Dr. Edmund E. King, Toronto, president of the Academy of Medicine.——Dr. Ezra H. Adams, Toronto, epidemiologist of the department of public health for that city, has been appointed health officer to the border cities and towns of Ontario, with headquarters at Windsor.——Col. Perry G. Goldsmith, Toronto, who was one of the first Toronto physicians to go overseas, has been appointed a Commander of the Order of the British Empire.——Lieut.-Col. C. E. Cooper Cole, Toronto, who has been in command of Witley Camp Hospital, England, has been appointed a Commander of the Order of the British Empire.——Major Frederick A. Cleland and Lieut.-Col. Cameron A. A. Warren, Toronto, have arrived home from Siberia.

LATIN AMERICA

Children's Hospital in Venezuela.—At the end of last March there was opened at Caracas a children's hospital with funds furnished by wealthy persons of that capital.

Tuberculin Testing in Uruguay.—The congress of Uruguay has voted, on recommendation of the president, the sum of $20,000 to enforce the law, recently enacted, providing for the compulsory testing with tuberculin of all milch cows.

New Public Health Buildings in Guatemala.—During the year 1918 there was established a Vaccination Institute in Guatemala, and, in addition, the Mothers' Asylum was rebuilt and there were built four new wards in the General Hospital of Guatemala.

Public Health Expenses in Guatemala.—During the year 1918, there was expended in Guatemala over 18,000,000 *pesos* for public health and public assistance work, distributed as follows: 1,961,624 *pesos* for public health purposes and 16,325,838 for public assistance.

Temperance Zones in Paraguay.—A new law enacted in Paraguay provides for the creation of temperance zones within which no alcoholic drinks can be either manufactured or sold. The temperance zones will be fixed by the president and any industrial establishment, in order to be considered a temperance zone, must have at least 100 permanent employees.

Workmen's Compensation Legislation in Brazil.—The president of Brazil has recently approved the law on industrial accidents which requires employers to pay a certain compensation to workers, victims of accidents, or their families in case of death. Employers are also compelled to give all necessary medical, pharmaceutical and hospital relief. The regulations for the enforcement of the law were approved by the president, March 12.

Prophylaxis of Venereal Disease.—The *Semana Médica* of Buenos Aires relates that all of the public attending the film version of "Damaged Goods," while it was being presented there, were given a Spanish translation of Fournier's small pamphlet, "For Our Sons When They Are Eighteen." This pamphlet was published in Spanish in Argentina in 1907 by the Sociedad argentina de profilaxis sanitaria y moral. The enterprise of the moving picture producer is lauded by our exchange which states that many of the resident physicians have made a point of congratulating him.

Interchange of University Professors.—The *Revista Médica del Uruguay* states that Professor Maira, interchange professor from Chile at Montevideo, recently delivered three addresses there, "Medicine in Chile," "Mineral Hot Springs in Chile," and "Treatment of Asthma with Epinephrin." The Sociedad de pediatria held a special session in his honor, the Club Médico del Uruguay entertained him, and the governor of the republic tendered him a banquet at which the rector of the university presided, and to which the leading men in the official medical world had received special invitations.

Reorganization of the National Public Health Service in Argentina.—The members of the newly appointed Consejo

Consultativo de Higiene met recently in one of the halls of the Departamento Nacional de Higiene, Dr. E. R. Coni presiding, and appointed committees for different branches of the work outlined. Dr. Coni was charged with the task of drawing up a new sanitary code for the country, and a special committee was appointed to study the subject of influenza. This committee consists of Drs. M. R. Castex, D. Decoud and Julio Méndez. Dr. Coni presented for the consideration of the council a proposed regulation for requirement of a medical certificate before marriage.

Uruguayan Professors in Buenos Aires.—The dean of the medical faculty of the University of Montevideo has appointed the following members of the faculty as interchange professors to go to Buenos Aires: Dr. H. G. Lagos to deliver in May a lecture on the "Surgical Treatment of Gastric and Duodenal Ulcers"; Dr. S. C. Rossi, to lecture in June. The lecture in July by Dr. J. F. González is to be on "Avariosis," and by Dr. J. Pou Orfila in August, "La patología general ginecológica y el estudio de las metabolismopatías y endocrinopatías." During September, Drs. J. B. Morelli and A. Navarro will each deliver a lecture, respectively, entitled "Heliotherapy and Thalassotherapy in Pulmonary Tuberculosis," and "Surgery of the Pylorus." The *Revista Médica del Uruguay* adds to this notice that the names of the professors to be sent from Buenos Aires to Montevideo have not yet been published.

GENERAL

American Society for Clinical Investigation Elects Officers.—For the year 1919 the American Society for Clinical Investigation has elected the following officers: president, Warfield T. Longcope, New York; vice president, R. T. Woodyatt, Chicago; treasurer, Alfred F. Hess, New York; secretary, Walter W. Palmer, New York; council, George Blumer, New Haven, Conn.; Roger Lee, Cambridge, Mass., and Ernest E. Irons, Chicago.

Chemical Industry Exposition.—The fifth exposition of chemical industries will be held in the First Regiment Armory, Chicago, during the week of September 22. September 22 and 23, the American Institute of Mining Engineers will occupy the stage. The American Electrochemical Society and Technical Association of Pulp and Paper Industry, September 25 to 27, inclusive. A symposium on Safety in the Plant and Mine will occupy one afternoon. M. L. Leopold, safety engineer of the U. S. Bureau of Mines, will preside at this symposium, and in the evening a series of motion pictures of safety work in plants, fields and mines will be shown.

Annual Meetings of Special Societies.—The American Pediatric Society at its annual meeting, in Atlantic City, June 16 to 18, elected the following officers: president, Dr. Thomas S. Southworth, New York; vice president, Dr. Alfred Hand, Jr., Philadelphia; secretary, Dr. Howard Childs Carpenter, Philadelphia; treasurer, Dr. Charles Hunter Dunn, Boston, and recorder and editor, Dr. Oscar M. Schloss, New York City.——The American Climatological and Clinical Association, at its annual meeting, held in Atlantic City, June 14 to 17, elected the following officers: president, Dr. Lawrason Brown, Saranac Lake, N. Y.; vice presidents, Drs. Charles W. Richardson, Washington, D. C., and Dr. Josiah N. Hall, Denver; secretary, Dr. Arthur K. Stone, Framingham Center, Mass., and councilor, Dr. Guy Hinsdale, Hot Springs, Va.

Proposed Legislation.—The following bills are under consideration in the United States Senate:

No. 563, introduced by Senator Fletcher, to amend an act entitled "An Act to appoint Joseph Y. Porter, Key West, Fla., a lieutenant-colonel and deputy surgeon-general and to place him on the retired list of the Army."

No. 559, introduced by Senator Williams, to authorize certain late physicians and surgeons of the United States Volunteer Army in the War with Spain to practice their respective professions in any territory, district, dependency or possession of the United States, under the constitutional jurisdiction of Congress upon the presentation and proof of certain facts.

No. 813, introduced by Senator Owen, to establish a sanitary reserve corps for the Public Health Service.

No. 814, introduced by Senator Owen, to establish a department of health and for other purposes.

The following bills have been introduced in the House:

No. 2484, introduced by Representative Webster, to provide for the restoration to their former positions and rank medical employees in the Public Health Service who resigned such services to enlist in the war with Germany.

No. 2482, introduced by Representative Baker, to grant rank to the Army Nurse Corps.

No. 3080, introduced by Representative Nolan, to commission acting assistant or contract surgeons of the United States Army who have served in the Army for a period of at least three months to be first-lieutenants in the Medical Reserve Corps of the Army in case of necessity.

House Joint Resolution 53, introduced by Representative Montague, to restore John B. H. Waring, Richmond, Va., late a Captain in the Medical Corps, the files of which he was deprived, and place him on the retired list.

Bequests and Donations.—The following bequests and donations have been recently announced:

Lynn Hospital, Lynn, Mass., $100,000, by the will of the late Walter H. Breed, Lynn.

In memory of Capt. Chauncey B. Keep, and to be used as an endowment for an infirmary for Yale University, a donation of $54,000 in securities by Mr. and Mrs. Chauncey Keep and Mrs. Katherine Keep of Chicago.

St. Joseph's Hospital, Philadelphia, for the benefit of its social service department about $5,000, the proceeds of a lawn fête.

Jefferson Medical College, Philadelphia, $5,000 for the endowment of a free scholarship; Rush Hospital, for free beds in memory of Frances B. Tyson, $5,000, and Pennsylvania Training School for Feeble-Minded, Elwyn, and for "such medical and surgical treatment as shall contribute to the relief of mental and physical defects of defective classes, inmates of the institution," $2,000, by the will of Dr. J. Ewing Mears.

Episcopal and Pennsylvania Hospitals in Philadelphia, each $200,000; University of Pennsylvania Hospital, Orthopedic Hospital, Women's Medical Hospital of Philadelphia and Children's Hospital of Philadelphia, each $100,000; Polyclinic Hospital, Philadelphia, $50,000; Pennsylvania Training School for Feeble-Minded, Elwyn, $25,000, and Jefferson Medical College, Philadelphia, $10,000, by the will of Harriet Blanchard.

Toronto charities, including the Toronto General Hospital, and Home for Incurables, $500,000, by the will of William Ramsay.

Elizabeth Garrett Anderson Hospital, London, England, $5,000 for the endowment of a Canada bed in the hospital donated by the Elizabeth Garrett Anderson Memorial Fund.

Public Health Legislation.—A movement to create a Department of Public Health in the federal government has been launched in Congress in the form of a bill introduced by Congressman John McDuffie of Alabama, which authorizes the President to appoint a secretary of public health at a salary of $12,000 who is to be the head of the department. The organization of bureaus is left to Congress, but the President is authorized to transfer to the new department all government bureaus now devoted to public health work. The records and office equipment of the existing health bureaus are also to be transferred. The secretary of public health shall have personal jurisdiction and supervision of all public health matters of the federal government, except those of the medical departments of the Army and Navy. The measure provides for the organization of the following bureaus: sanitary research, vital statistics and publications, foods and drugs, quarantine, sanitary engineering, government hospitals and personnel and accounts. Additional bureaus may be established by the secretary with the approval of the President. The cooperation of state health organizations is authorized and the organization of a health board of the state health representatives is arranged for, to serve in an advisory and cooperative capacity, but without legal powers. The sum of $10,000,000 is appropriated to be used as follows: for the establishment of a homogeneous system of health administration in the respective states, $1,000,000; for rural sanitation, $2,000,000; for the control of communicable diseases, including tuberculosis, venereal diseases, malaria, hookworm, etc., $5,000,000; for scientific study of the causes and manner of transmission of disease, $2,000,000. It is provided that "it shall be the specific duty of the Department of Public Health to foster and promote all matters pertaining to the conservation and improvement of the public health and to collect and disseminate information relating thereto." It is known that there is considerable sentiment in Congress for a strong public health department, although Congress is not generally in favor of additional governmental expenditures. The President would have the authority to make the secretary of public health a member of his cabinet if he chose.

FOREIGN

Prizes Offered by Turin Academy of Sciences.—The Reale Accademia delle Scienze of Turin, Italy, announces that the Vallauri prize of 26,000 lire ($5,200), is to be awarded for the best work on any of the physical sciences that was published in the four years ending Dec. 1, 1918. The prize is open to foreigners as well as to Italians. The works sent in to compete for the prize must reach the Academy, Via Po 18, Turin, before Dec. 31, 1919. A further prize of 1,200 lire is offered for the best manuscript or article published since Jan. 1, 1915, on the etiology of endemic cretinism. The *Gazzetta degli Ospedali* adds to the above notice that none of the works sent in to compete for these prizes will be returned.

PARIS LETTER

Paris, June 5, 1919.

Physicians on Disability Boards

The chamber of deputies has just passed a bill that had been adopted previously by the senate, so that it thus becomes a law. This law changes completely the personnel of disability boards. Until now, these boards were composed of a president, who was a general or a colonel belonging to the regular army, a recruiting officer, an officer of the gendarmerie, and a member of the commissary department. Physicians attended the sessions only in the capacity of experts to give their advice when requested. From now on, the disability boards will have the following personnel: an inspecting physician or chief surgeon as president; a "médecin-major" of the first or second class, and two officers belonging to the army corps in the field, to be appointed by the general commanding the division and to be of a rank inferior to that of the inspecting chief surgeon who acts as president. In case of disagreement, the president has the deciding vote. This gives absolute control in the discussions to the physicians, who up to the present time have acted only in an advisory capacity. A recruiting officer and a member of the commissary department will be present at the meetings without having any consultative or deliberative power. They will only have to record the results of the discussions.

Roentgenology in the Army Medical Corps During the War

At a recent meeting of the Académie de médecine, Dr. Haret, instructor in roentgenology in the hospital Saint-Antoine, reported the progress of the roentgenologic service during the war. At the beginning of hostilities there were ten base and eleven transport roentgenologic stations. There was a shortage of motor trucks specially equipped for roentgenologic work and also of specially trained personnel. When, in 1915, the surgical motorcars were introduced, every unit was provided with a special truck for roentgenologic work. In 1918, there were 400 roentgenologic units for the army and 450 for the country at large. Before the war there were only 175 graduate roentgenologists in France. Courses were established at l'Ecole d'application de médecine et de pharmacie militaires de Val-de-Grâce, and when the armistice was signed there were 840 physicians in the roentgenologic service, with 1,010 male and 175 female assistants. This material and these units will be used now in some of the hospitals of the provinces in order that all the surgical clinics may be in a position to use at the bedside of every patient or in the operating room the necessary roentgen control.

The Union des Femmes de France

The Union des Femmes de France (one of three societies that compose the French Red Cross) has just met in a general assembly under the presidency of Mme. Perouse. The report of the secretary brought out the great increase in the work of the society during the last few years. Of the 90,000 members, more than 60,000 have been actively devoted to the various branches of work of the society in Paris and in the provinces. In more than 365 auxiliary hospitals, the society has opened clinics, nurseries and dispensaries for children and adults, welfare centers for soldiers, centers for the reeducation of the war-injured, canteens at railway stations, etc. The number of nurses that have served in the auxiliary hospitals of the Union des Femmes and in the military sanitary units of France and of the allied nations is 20,000. Forty-five have died on the field of honor or as a result of sickness contracted during the performance of their duties. Besides, the Union des Femmes has created important antituberculosis centers at Tonnay-Charente, Monbran, Menton, Berck-Plage, and other places, and they have opened forty-five relief stations in the devastated regions. Most of these furnish lodging and meals, when necessary; contain a dispensary, and maintain a distribution service in the villages of the neighborhood. In Alsace and Lorraine, eleven committees have been organized. The union has spent during the war the sum of $19,000,000.

A Gift of 10,000 Francs for the Institute of Child Welfare

I reported in my preceding letter the generous gift made by the American Red Cross for the purpose of creating in the Faculté de médecine de Paris an institute for child welfare on condition that one million francs should be collected in France for the same object. Dr. G. Variot, vice president of the Société de médecins des hôpitaux de Paris and chief of the services of the Institut de puériculture de l'Hospice des Enfants-Assistés, desiring to contribute to the fund, has sent to the dean of the Faculty of Medicine the sum of 10,000 francs.

Promotion of Physical Culture

M. Paté, deputy for Paris, has transmitted to the chamber of deputies a bill that provides compulsory physical training for the young men of France.

An American Mission in France

An American mission composed of about ten professors from American universities, escorted by Mr. MacDougal Hawkes, president of the French Institute of the United States, has just arrived at Havre. The object of the mission is, among other things, to visit our institutions of higher learning in Paris and in the provinces as well, and to promote more cordial social and intellectual relations between these French institutions and similar institutions in the United States, to which end it is proposed to send American students to France and French students to the United States.

Death of Dr, Dominici

The death of Dr. Dominici at the age of 54 years has been reported. He was known for his work on radium and its various rays.

Personal

At the meeting of May 22, the council of the Faculty of Medicine of Paris appointed as professor of general pathology and therapeutics Dr. Gouget, previously an associate professor of the same faculty. The council has also appointed to the chair of parasitology and natural history Dr. Brumpt, previously associate professor and chief of parasitic research. Dr. Brumpt succeeds the late Professor Blanchard.

Anomalies of the Thermic Curve in Cardiac Irritability

At one of the recent meetings of the Société médicale des hôpitaux de Paris, Dr. Laubry, physician of the hospitals, and Dr. C. Esmein, chief of the clinic of the Faculty of Medicine of Paris, declared that they have often observed that in cases of cardiac irritability there is a tendency to hyperthermia. Generally speaking, this tendency is not marked and manifests itself only by a slightly thermic shift from time to time. This gives to the thermic curve an irregular aspect while remaining, as a whole, within the normal limits. Sometimes the temperature, which has shown hardly any change in the morning, rises during the evening (either from time to time or daily), reaching around 100 F. This phenomenon has been proved, by means of a careful inquiry, to be independent of malingering. It occurs in persons who have been engaged in some kind of physical or mental activity just before the temperature was taken. An hour in bed causes it to disappear, or at least reduces it considerably. It presents thus the essential characteristics of hyperthermia caused by fatigue at the onset of pulmonary tuberculosis. However, Laubry and Esmein never have seen any patients with an irritable heart and presenting this anomaly in their thermic curve who developed pulmonary tuberculosis later on. Nor were they able to connect this phenomenon with any infectious complication. It would seem that this manifestation is produced by the irritability of the heart or, speaking more correctly, it would appear to be the effect of the morbid mobility of the nervous system giving origin to the cardiac irritability. These data confirm the theory of Küss and others as to the polymorphic etiology of fever resulting from fatigue and would seem to invite caution in explaining this phenomenon in cases of cardiac irritability.

Dr. A. Siredey has observed a certain number of cases of this kind among his patients. A notable instance was the case of the son of one of his colleagues. From his fifteenth to eighteenth year he presented this form of hyperthermia, having a temperature every evening of from 100.4 to 100.9 and sometimes 102.2 after a long walk. He was not found to have any kind of organic lesion. Later on, this young man developed normally and has served through the whole war without presenting the slightest pathologic symptom.

Dr. C. Aubertin has emphasized the importance of these febriculae, for, during the war, many soldiers presenting these symptoms have been considered tuberculous and have been granted disability claims that were not justified. Dr. Halle has observed a series of cases presenting similar symptoms. Sometimes this instability of temperature persists for several years. It generally occurs in nervous impressionable children, and especially in well-to-do families, in which every one overeats; gout is common and sour stomach and vomiting spells prevail. In most cases one cannot find in these persons any organic lesions or any sign of tuberculosis. The best thing to do is simply to remove the cause; for in most of the cases the trouble straightens itself out.

Dr. Nobécourt, associate professor of the Faculty of Medicine of Paris, states that these cases are found not only in well-to-do families: they are also seen in the hospital. He has observed, together with Dr. Merklen, in the Hôpital des Enfants-Assistés, a rise of temperature after play, but this disappears after half an hour's rest. Thermic reaction after a walk, though important in an adult from a semeiologic standpoint, is of very little value in a child unless it still persists after an hour and a half of rest. The clinical examination and the tuberculin test have demonstrated that these children cannot be considered tuberculous.

Dr. Emile Sergent has seen a number of these cases in the army, among those claiming to be tuberculous. Thermic instability can also often be observed in women, and not infrequently in similar cases one can see signs of hyperthyroidism, especially among young girls at the beginning of puberty or in women as the menopause approaches. Sergent believes that these factors offer an explanation for not a few cases of this kind.

LONDON LETTER

London, May 28, 1919.

Subsidized Parentage

Evidence has been given before the National Birth Rate Commission in favor of the endowment of motherhood by the state. In opposition to this, Mr. Harold Cox, the leading individualist politician of the day, pointed out that the population of England and Wales doubled in the sixty years that ended in 1911. Suppose that rate of increase were continued indefinitely, then in the year 2201 the population of England and Wales alone would be 2,295,000,000. No further argument was needed to prove that the rate of increase in the population must decline as the volume grows. The rate could only be reduced either by diminishing the birth rate or by increasing the death rate. If birth control were in itself immoral, it would still be immoral when our population had reached such a volume that a reduced rate of increase became necessary. A high infantile death rate was the almost invariable accompaniment of a high birth rate. Thousands of children were fated only to live a few weeks or a few months. This involved a vast waste of human effort. In the East the waste of women's bodies and of infant life was even more appalling. Both in India and in China, out of every thousand children born often more than 500 died. The socialist proposal to give a state subsidy to every woman who produces a child would only increase the evil. Children reared by subsidized parents would probably lounge through life leaning on the state. The Germans established a few years ago an imperial grant to mothers who suckled their babies. Last year's Local Government Board report on infant welfare in Germany says: "It is recorded from a large number of centers that mothers discontinue breast-feeding immediately the imperial allowance ceases, regardless of the well-being of their infants." It would be futile to deal with the German peril by means of what might be called a cradle competition. In such a contest we must inevitably be beaten, because Germany started the race with a much larger volume of population. England at the present moment was overpopulated. Doubtless considerable improvement would be effected if our industries could be established in garden cities. But if this process were carried to the point of giving all our overcrowded millions a quasirural surrounding, there would be no real country left. Our island was too small to afford possibilities for a full life to all the millions now crowded on it. He therefore welcomed the decline in population, and hoped it would continue.

The Ministry of Health Bill and the Nostrum Evil

In a previous letter to The Journal was described the attempt of the House of Lords to deal with the nostrum evil in connection with the ministry of health bill. A further motion has been made by Lord Bledisloe, who said that the law to a large extent provided for the protection of those purchasing on the strength of fraudulent advertisements, quack and sometimes poisonous drugs and suffering in health thereby, but that no department considered it its special duty to institute prosecution. Replying for the government, Viscount Sandhurst said that further consideration had been given to this very important subject. But the more it was considered, the more difficult and complicated it was found to be. The departments concerned were the Local Government Board, the customs and excise, the Privy Council, the post office, and the Home Office. The amendment really stated the law as it stood; it did not propose any new power. So far as the Local Government Board was concerned, the new minister would take over powers and duties which would include the food and drugs act of 1875, but proprietary medicines were specifically excluded from that act. The customs and excise prosecuted for breaches of law in connection with the stamp duty, among others, venders of "patent medicines." But that was a revenue matter, and must be left in the hands of the revenue authorities. The Privy Council was indirectly concerned in connection with the Pharmaceutical Society, which prosecuted for the illegal sale of poisons. The post office prosecuted for the transmission of indecent matter through the post. That was a subject of post office administration, and could not be transferred to another department. The Home Office might receive complaints, but it was the business of the aggrieved person or of the local police to prosecute, and for these purposes the local police were not under the Home Office. Nothing more could be effected so long as the law remained unchanged, but the public prosecutor was, in grave cases, at the service of any department. As soon as the minister could, he would suggest amendments in the law. The government hoped that Lord Bledisloe would be satisfied with this assurance. Eventually, at the suggestion of the lord chancellor, it was agreed that he, Viscount Sandhurst, the attorney general, and director of public prosecution, should confer so as to be able to make a proposal.

Creation of Directorates of Hygiene and Pathology Within the Army Medical Department

Official sanction has been given to an important reform brought forward by Sir John Goodwin, director-general of the army medical service—the linking-up under a definitely planned organization of the activities of the different departments and of the persons hitherto concerned with the various problems of preventive medicine, pathology and tropical diseases bearing on the health of the army in peace and war. The need for such a reorganization had long been felt, but not until the war brought wider recognition of the benefits of scientific research and the amount of training, work, and organization required to obtain the best results did the urgent need for a better system become manifest. The principal objects are: (1) To utilize to the fullest extent the benefits of new knowledge, as these become available, through close cooperation between those working within and outside the army and by initiating and controlling research work in connection with problems affecting the health of the troops; (2) to raise the standard of sanitary and pathologic work in the army by creating within the army medical department such an organization as will ensure this cooperation and will, at the same time, furnish inducement to officers who have specialized in these subjects to continue to work therein. It is also hoped that the improved prospects now opening up may encourage young medical men whose bent and inclinations lie in these directions to enter the service. The scheme is as follows: Two new directorates of hygiene and pathology, respectively, have been created under the director-general, army medical services, as a part of the war office organization of the army medical department. These directorates will be directly responsible to the director-general for all matters relating to their respective spheres, and they will take over from the various branches of the army medical department the sections of this work which have hitherto been distributed among those branches. Advisory committees will be appointed to assist the directors, composed of both military and civilian members. Their constitution will be as follows:

Hygiene Advisory Committee.—Chairman: The director of hygiene; vice chairman: The deputy director of hygiene. Members: The professor of hygiene at the Army Medical College, a representative of the Directorate of Fortifications and Works, a sanitary engineer, a civil professor of hygiene or a health officer of a county or large city, a physiologist, and a representative of the medical department of the Local Government Board.

Pathological Advisory Committee.—Chairman: The director of pathology; vice chairman: The deputy director of pathology. Members: The professor of pathology, Army Medical College; the professor of tropical medicine, Army Medical College; two civilian professors or recognized experts in pathology; a civilian professor or expert in tropical medicine, and a representative of the Medical Research Committee.

Marriages

ESDRAS JOSEPH LANOIS, Lieut., M. C., U. S. Navy, to Miss Gertha Haines, Portsmouth, N. H., at Somerville, Mass., June 7.

JOSEPH FRANK BLAKE, Chadbourn, N. C., to Miss Eva MacDonald of Wilmington, N. C., May 31.

RALPH ALLEN WILCOX to Miss Stella Judson Murgittroyd, both of Phoenix, N. Y., June 12.

GOODRICH TRUMAN SMITH to Miss Amparito Farrar, both of New York City, June 2.

CHARLES BERNARD RENTZ, Sanborn, Iowa, to Miss Ruth Miller of St. Paul, June 9.

HARRY LEE HUBER to Miss Eleanor Johnson, both of Chicago, June 14.

Deaths

William Clark Payne, Marshalltown, Iowa; Western Reserve University, Cleveland, 1853; aged 88; assistant surgeon of the Ffty-Sixth Ohio Volunteer Infantry, and later of the Twenty-First Ohio Volunteer Infantry during the Civil War; for more than forty years a practitioner of Marshalltown; died, June 4, in a sanatorium in Bozeman, Mont., from senile debility.

Paul C. Ohaver, Fullerton, Neb.; Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa, 1904; aged 45; a member of the Nebraska State Medical Association and president of the Nance County Medical Society in 1915; mayor of Fullerton in 1913; died in the Matson Hospital, Columbus, Neb., June 8, from valvular heart disease.

Benjamin Delos Paul, Indianapolis; Harvard Medical School, 1918; aged 28; formerly an intern in the Boston State Hospital; who had been a first lieutenant, M. C., U. S. Army, and was honorably discharged, January, 1919; was injured in a collision between automobiles, recently, and died after two hours at the Reid Hospital, Richmond, Ind.

Paul Lange Cort ⊕ Trenton, N. J.; Jefferson Medical College, 1895; aged 48; assistant physician to the New Jersey State Hospital, Trenton, from 1897 to 1904, and thereafter consulting neurologist; attending physician and pathologist to Mercer Hospital; a member of the common council of Trenton in 1907; died at his home, June 12, from heart disease.

George Stillman Browning ⊕ Sioux City, Iowa; University of Illinois, Chicago, 1899; aged 44; formerly professor of principles and practice of medicine, electrotherapeutics and electrodiagnosis in the Sioux City College of Medicine; local surgeon to the Illinois Central Railroad; died at his home, June 8, from multiple neuritis.

John Joseph Ashley, Brooklyn and St. Cloud, Fla.; New York University, New York City, 1884; aged 75; a veteran of the Civil War; medical director for the state of New York of the Grand Army of the Republic in 1890; died at his home in St. Cloud, April 11, from asthma.

Harry J. Haiselden, Chicago; University of Illinois, Chicago, 1893; aged 49; died in Havana, Cuba, June 18, from cerebral hemorrhage. Dr. Haiselden attained considerable notoriety in 1915 through publicity concerning refusal to operate on a congenitally defective infant.

James T. Evans, Pascagoula, Miss.; University of Louisville, Ky., 1873; aged 67; a member of the Mississippi State Medical Association, and once president of the Jackson County Medical Society; died at his home, April 20, from bronchopneumonia following influenza.

Thomas Henry Becker, Bluefield, W. Va.; Jefferson Medical College, 1911; aged 33; a member of the West Virginia State Medical Association; died suddenly in Jefferson Hospital, June 8, from heart disease, believed to have been due to the use of headache powders.

Peter E. B. Robertson, Gainesville, Ga.; Medical College of Georgia, Augusta, 1891; aged 52; twice mayor of Gainesville; cranked his car while it was in gear near Gainesville, June 8, and was run over by the car and instantly killed.

Thomas Benton McCown ⊕ **Major, M. C., U. S. Army,** San Diego, Calif.; Northwestern University Medical School, Chicago, 1893; aged 51; on duty at military headquarters, El Paso, Texas; was found dead in his office, June 16, from heart disease.

Hiram L. Lutz ⊕ Philadelphia; University of Pennsylvania, Philadelphia, 1900; aged 40; a specialist in ophthalmology; clinical chief of the eye dispensary in his alma mater; died in the University Hospital, June 8, after an operation for tumor.

Benjamin A. Garr, Louisville, Ky.; Hospital College of Medicine, Louisville, 1877; aged 65; at one time state medical examiner for the Ancient Order of United Workmen; died at his home, June 9, from cerebral hemorrhage.

John Kinghorn Lawson ⊕ **Lieut., M. C., U. S. Army,** Dayton, Ohio; Ohio State University, Columbus, 1916; aged 25; on duty in a base hospital near Paris; died in that institution, May 8, after an operation for appendicitis.

Paul Bartholomew Work ⊕ Elkhart, Ind.; University of Michigan, Ann Arbor, 1911; aged 33; who was under treatment for diabetes at the Mayo Brothers sanatorium, Rochester, Minn.; died in that institution, June 7.

Harry Minhern Lavelle ⊕ **Capt., M. C., U. S. Army,** Pittsburgh; Jefferson Medical College, 1900; aged 44; on duty with the American Military Mission in Berlin; died in that city, May 28, following a surgical operation.

James Edward Crook, Jacksonville, Ala.; Vanderbilt University Nashville, Tenn., 1883; a member of the Medical Association of the State of Alabama; died in a hospital in Atlanta, Ga., about June 9.

James Winfield Small, Alpena, Mich.; Hahnemann Medical College, Chicago, 1889; aged 59; a member of the Michigan State Medical Society; died at his home, May 22, from valvular heart disease.

William E. Lloyd, Jr., Forest City, Pa.; Baltimore Medical College, 1894; aged 46; died in the Mid-Valley Hospital, Olyphant, Pa., June 2, three days after an operation for appendicitis.

William N. Unkefer, Piqua, Ohio; Cincinnati College of Medicine and Surgery, 1879; aged 65; died in the Memorial Hospital, Piqua, June 4, after an operation for the removal of gallstones.

Hiram R. Thomas, Flint, Mich.; American Eclectic Medical College, Cincinnati, 1893; aged 74; died at the Wabash Valley Sanitarium, Lafayette, Ind., June 5, from a nervous breakdown.

Andrew E. Johnson, Cloquet, Minn.; University of Minnesota, Minneapolis, 1891; aged 57; died in a hospital in Duluth, Minn., June 3, from carcinoma of the liver.

Aaron S. Sensenich ⊕ Wakarusa, Ind.; Rush Medical College, 1881; aged 69; died at his home, June 4, from cholelithiasis, complicated by diabetes.

William Wesley Cole, Silver Creek, N. Y.; Cleveland University of Medicine and Surgery, 1890; aged 60; died at his home, April 8, from diabetes.

William Augustus Burns, Philadelphia; University of Pennsylvania, Philadelphia, 1869; aged 75; died at his home, June 8, from heart disease.

Samuel N. Holland, Lavonia, Ga.; Medical College of the State of South Carolina, Charleston, 1880; aged 69; died at his home, May 17.

John A. J. Penny, Neuse, N. C. (license, North Carolina, 1885); aged 76; a practitioner for fifty-seven years; died at his home, June 6.

George A. Wise, Benton, La.; Tulane University, New Orleans, 1876; aged 68; died in a sanatorium in Shreveport, La., June 5.

Greggar Smedal ⊕ La Crosse, Wis.; Rush Medical College, 1903; aged 44; a specialist in surgery; died about June 1.

H. Watson Smith, Folsom City, Calif.; Rush Medical College, 1870; aged 75; died at his home, May 27, from tuberculosis.

Jacob O. Knipe, Norristown, Pa.; Jefferson Medical College, 1862; aged 82; died at his home, June 5.

Frank M. Ewing, Lincoln, Ill.; Jefferson Medical College, 1882; aged 62; died at his home, June 5.

⊕ Indicates "Fellow" of the American Medical Association.

Correspondence

"FAS EST ET AB HOSTE DOCERI"

To the Editor:—Let us have no more abstracts from the *Deutsche medizinische Wochenschrift.*

Charles D. Ryan, M.D., Kokomo, Ind.

To the Editor:—I endorse every word he [Dr. Ross G. Loop] has written, and cannot understand how any one who has tried to learn what the Germans have done during the past decade wants their products of any kind.

F. A. Butterfield, M.D., Dakota, Ill.

To the Editor:—I certainly heartily approve of every word of Ross G. Loop of Elmira, N. Y., in the issue of June 7, 1919, against any more German literature. I will see that every copy of mine of The Journal of the American Medical Association is burned on receipt of same if ever I find any of that propaganda, and I think every other Eaton County doctor will do the same. I will do all I can to help do it. We are through with anything German in any form—schools and all.

F. W. Sassaman, M.D., Charlotte, Mich.

To the Editor:—I note with pleasure Dr. Ross G. Loop's communication in The Journal, June 7, 1919. As a medical officer who served in France for twenty-one months and one who has seen first hand the wanton destruction of that country, I heartily concur in his sentiments. I wish that it were possible at least temporarily to revoke the privileges of our medical societies to many German physicians and surgeons. Their attitude of supercilious condescension has always been a most unpleasant note; and as Dr. Loop remarks, are we so dependent on them for our scientific pabulum? As I write this, a card has come to hand from a German physician practicing in Carlsbad, with whom I had a slight acquaintance, sending me his compliments and announcing the resumption of his practice. Surely such thick skinnedness and lack of all decent feeling is not prejudicial in their favor.

Harold Barclay, M.D., New York.

[Comment.—For over a year the Medical Research Committee of Great Britain has been printing in the Medical Supplement to the "Review of the Foreign Press" abstracts of German, Austrian and other periodical medical literature. Their action, similar to that of The Journal in abstracting this literature, is recognition of the aphorism which forms the caption to this series of letters "It is proper to learn even from the enemy."—Ed.]

NEUROPSYCHIATRY

To the Editor:—I have read with much interest and value the address of the President of the American Medical Association delivered at the Atlantic City Session. The constructive values of preventive medicine have been vividly set forth therein, and the invaluable contributions of medicine as a determining factor in war, emphasized. But yet, I looked in vain for any mention of the work in neuropsychiatry of the American Army Medical Corps, as a feature in preventive medicine epoch marking in its historical value. Why is it that in reciting the work done in preventive medicine, in the A. E. F., omission is made of the remarkable work in neuropsychiatry? Why is it that in the Allied Health Conference, held in April "overseas," neuropsychiatry failed in being represented? Why is it that cognizance is not taken of the "man power" potentials vested in prevention, by elimination through the Division of Neurology and Psychiatry of the undesirables from the army, and of equal importance, the intelligent handling of desirables in so-called "shell shock" cases, at the front, during the combat period, as being a contribution in preventive medicine worthy of mention?

American psychiatry (by the term "psychiatry" is included all manner and form of mental disorders) made for itself a place in the history of medicine during America's participation in the great war and I, for one, want to see recognition given to this fact in such addresses as that of the President of the American Medical Association.

Frank P. Norbury, Springfield, Ill.

ONE CAUSE OF OCULAR DISCOMFORT AT THE "MOVIES"

To the Editor:—Ordinarily the vertical image on the screen is seen by both eyes, with optical axes in a plane at right angles to the vertical plane of the screen. This is the case when an unobstructed view of the screen is to be had. But many times, the view is obstructed by an intervening spectator and one tilts the head to one side or the other in order that both eyes may be used or that the screen may be seen at all. This changes the relationship of the plane of the screen and the plane of the optical axes from a right angle to an acute angle. The result of this change in angle is to throw the image on to other and unaccustomed portions of the retina. The consequence of this change is the unconscious endeavor to return the plane of the optical axes of the eyes to the right-angled relationship with the vertical plane of the screen. This endeavor manifests itself by the excessive innervation of the muscles of rotation of the eyeballs, resulting in muscular tiring or ocular discomfort.

The remedy lies in an unobstructed view of the screen and a continued vertical position of the head. The ideal moving picture theater should, therefore, have a marked pitch to the floor so that each spectator will have an unobstructed view of the screen over the head of the spectator seated directly in front. In lieu of this, a careful alternate spacing of seats will provide the necessary unobstructed line of vision.

H. S. Gradle, M.D., Chicago.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama: Montgomery, July 8. Chairman, Dr. S. W. Welch, State Capitol, Montgomery.

Arizona: Phoenix, July 1. Sec., Dr. Allen H. Williams, 219 Goodrich Bldg., Phoenix.

Colorado: Denver, July 2. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.

Connecticut: New Haven, July 8-9. Sec., Regular Bd., Dr. Charles A. Tuttle, 196 York St., New Haven; Sec., Homeopathic Bd., Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven; Sec., Eclectic Bd., Dr. James E. Hair, 730 State St., Bridgeport.

District of Columbia: Washington, July 8-10. Sec., Dr. E. P. Copeland, The Rockingham, Washington.

Kentucky: Louisville, July 1-3. Sec., Dr. J. N. McCormack, Bowling Green.

Louisiana: New Orleans, July 1-3. Sec., Dr. E. W. Mahler, 141 Elk Place, New Orleans.

Maine: Augusta, July 1-2. Sec., Dr. Frank W. Searle, 776 Congress St., Portland.

Massachusetts: Boston, July 8-10. Sec., Dr. Walter P. Bowers, State House, Boston.

Nebraska: Lincoln, June 30-July 2. Sec., Dr. H. J. Lehnhoff, 514 First National Bank, Lincoln.

New Mexico: Santa Fe, July 14. Sec., Dr. R. E. McBride, Las Cruces.

North Dakota: Grand Forks, July 1-4. Sec., Dr. G. M. Williamson, 860 Belmont Ave., Grand Forks.

Oklahoma: Oklahoma City, July 8-9. Sec., Dr. J. J. Williams, Weatherford.

Oregon: Portland, July 1-3. Sec., Dr. Frank W. Wood, 559 Morgan Bldg., Portland.

Pennsylvania: Philadelphia and Pittsburgh, July 8-10. Sec., Thomas E. Finegan, State Capitol, Harrisburg.

Rhode Island: Providence, July 10-11. Sec., Dr. B. U. Richards, State House, Providence.

South Dakota: Deadwood, July 8. Sec., Dr. P. B. Jenkins, Waubay.

Utah: Salt Lake City, July 7-8. Sec., Dr. G. F. Harding, 407 Templeton Bldg., Salt Lake City.

Washington: Seattle, July 1-3. Sec., Dr. C. N. Suttner, 415 Old National Bank Bldg., Spokane.

West Virginia: Huntington, July 8-10. Sec., Dr. S. L. Jepson, Masonic Bldg., Charleston.

CONSOLIDATION LAW IN IDAHO

The following emergency laws have recently been passed in Idaho placing the licensing of those engaged in registrable professions, trades and occupations under the control of a department of law enforcement. This legislation is patterned after the Illinois Civil Administrative Act. It does not change the requirements for physicians in that state but provides that all clerical work and enforcing of the law shall devolve on the new department. The department is in charge of a commissioner, Mr. Robert O. Jones, and a director, Mr. Paul Davis. The law is as follows:

EMERGENCY LAWS, ARTICLE III

Sec. 31. *Department of Law Enforcement.*—The Department of Law Enforcement shall have power: To exercise the rights, powers and duties vested by law in the State Board of Medical Examiners, its president, secretary and treasurer.

Sec. 32. *Same: Registration of Occupations.*—The Department of Law Enforcement shall, wherever the several laws regulating professions, trades and occupations which are devolved upon the department for administration so require, exercise, in its name, but subject to the provisions of this act, the following powers:

1. To conduct examinations to ascertain the qualifications and fitness of applicants to exercise the profession, trade or occupation for which an examination is held; to pass upon the qualifications of applicants for reciprocal licenses, certificates and authorities.
2. To prescribe rules and regulations for a fair and wholly impartial method of examination of candidates to exercise the respective professions, trades or occupations.
3. To prescribe rules and regulations defining, for the respective professions, trades and occupations, what shall constitute a school, college or university, or department of a university, or other institution, reputable and in good standing, and to determine the reputability and good standing of a school, college or university, or department of a university, or other institution, by reference to a compliance with such rules and regulations.
4. To establish a standard of preliminary education deemed requisite to admission to a school, college, or university, and to require satisfactory proof of the enforcement of such standard by schools, colleges and universities.
5. To conduct hearings on proceedings to revoke or refuse renewal of licenses, certificates or authorities of persons exercising the respective professions, trades or occupations, and to revoke or refuse to renew such licenses, certificates or authorities.
6. To formulate rules and regulations when required in any act to be administered.

None of the above enumerated functions and duties shall be exercised by the Department of Law Enforcement, except upon the action and report in writing of persons designated from time to time by the commissioner of law enforcement to take such action and to make such report, for the respective professions, trades, and occupations as follows:

For the medical practitioners six persons, all of whom shall be graduates of reputable medical colleges or universities and reputable physicians licensed to practice medicine and surgery in this state, a majority of whom shall not be representative of any one school of medicine and among whom three schools of medicine shall be represented.

DEGREES IN PUBLIC HEALTH

Measures for standardizing the various degrees and certificates offered in the public health service have been considered recently at a meeting held at Yale University. Representatives of Johns Hopkins University, the Massachusetts Institute of Technology, Harvard University, New York University, and the University of Pennsylvania attended the conference. A recent issue of *Science* has published the following resolutions which were adopted at the meeting.

1. That the degree of Doctor of Public Health (for which the abbreviations should be Dr.P.H.) for graduates in medicine should normally be awarded after two years of work done under academic direction, of which one year at least should be residence; and that the requirements for the degree should include class work, practical field work, and an essay based on individual study of a particular problem.
2. That the degree of Doctor of Philosophy or Doctor of Science in Public Health or Hygiene should be conferred on students who hold the bachelor's degree from a college or technical school of recognized standing, and have satisfactorily completed not less than three years of graduate study. It is understood that this degree is based upon the fundamental sciences associated with hygiene and public health, including a knowledge of physics, chemistry, general biology, anatomy, physiology, physiological chemistry, pathology, and bacteriology, in addition to the thesis and other usual requirements for the Ph.D. and Sc.D. degree.
3. That the certificate in Public Health should be granted for not less than one academic year of work to those who have received a bacheolor's degree from a recognized college or technical school or have satisfactorily completed two years of work in a recognized medical school, provided they have previously pursued satisfactory courses in physics, chemistry, general biology and general bacteriology.
4. That the degree of Bachelor of Science in Public Health or Hygiene should be given for the completion of a four years' course, the last two years of which have been devoted to the fundamental sciences associated with hygiene and public health.
5. That the authorities having the appointment of health officials be urged to give preference as far as possible to persons holding degrees or certificates in public health or hygiene.

Connecticut March Examination

Dr. Edwin C. M. Hall, secretary of the Connecticut Homeopathic Medical Examining Board, reports the written examination held at New Haven, March 11, 1919. The examination covered 7 subjects and included 70 questions. An average of 75 per cent. was required to pass. One candidate was examined and passed. Three candidates were licensed on credentials. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
New York Homeopathic Medical College	(1912)	80.3

LICENSED BY ENDORSEMENT OF CREDENTIALS

College	Year Grad.	Certificate from
University of Iowa, Coll. of Homeo. Med. (1893) *;	(1910)	Iowa
Boston University	(1915)	R. Island

* Registered under the amendment to the Connecticut medical practice law, which provides that physicians who graduated prior to May 25, 1892, may claim registration without examination.

Medicolegal

Trying to Force Wassermann Test on Suspected Person

(Wragg v. Griffin, Sheriff, et al. (Iowa), 170 N. W. R. 400)

The Supreme Court of Iowa sustains a writ of habeas corpus, and orders the release of the petitioner therefor, in this case wherein the court says that the question presented may, in its final analysis, be stated as being:

> May the local board of health of the city of Des Moines, on suspicion that the petitioner is afflicted with a venereal disease, or has been exposed to such contagion, lawfully order him under arrest and subject him by force to an examination of his person and compel him against his will to permit a quantity of blood to be extracted from his veins, and then be held in continued durance until the blood has been sent to an expert in a distant city and by test therof it is determined whether such petitioner is or is not in fact so diseased?

After having examined with some care the various statutory provisions and board of health rules to which its attention was called, the court is forced to the conclusion that the power is nowhere provided either expressly or by necessary implication. While the statutes in terms authorize boards of health and health officers to deal with quarantinable diseases, there is no express provision for interfering with the liberty of persons who are merely "suspected" of being diseased. Special emphasis was placed on that part of the rules of the state board of health wherein it is made the duty of the mayor to direct the chief of police to cause persons suspected of being diseased "to be investigated," and authorizing health officers in such cases "to make examinations" of suspected persons and to detain them as long as it may be necessary to determine whether they are so afflicted. But even here there is an entire absence of any express authority to subject a suspected person to an examination by physical force or by an extraction of blood from his body by violence for experimental purposes. Men and women were examined and treated by physicians for sexual diseases for generations before the so-called "Wassermann test" was discovered or invented, and, so far as this court is informed, with reasonably reliable results. At least there was no evidence here that, even in the technical phrase of physicians, the word "examination" in such cases is understood as necessarily meaning a blood test by the Wassermann method, or by any other method involving violation of the person, and, in the absence of explicit authority for the subjection of a person to such treatment on suspicion alone, it ought not to be approved as a valid exercise of authority.

This petitioner may be a bad man, but the court has no right to assume such a fact for the purpose of minimizing his claim to protection of the ordinary rights of person which law and the usages of civilized life regard as sacred until lost or forfeited by due conviction of crime. Even when charged with the gravest of crimes, he cannot be compelled to give evidence against himself, nor can the state compel him to submit to a medical or surgical examination, the result of which may tend to convict him of a public offense, and, if there be any good reason why the same objections are not available in a proceeding which may subject him to ignominious restraint and public ostracism, it is at least a safe and salutary proposition to hold that, before the courts will uphold such an exercise of power, it must be authorized by a clear and definite expression of the legislative will. This the court does not have, and in its judgment the restraint of the petitioner, not as a diseased person whose detention in a separate house or hospital the statute authorizes, but solely as a suspect and for the avowed purpose of forcing the exposure of his body to visual examination and compelling the extraction of blood from his veins in search of evidence of a loathsome disease which may or may not exist, is a deprivation of his liberty without due process of law, and he is entitled to be set free.

Vaccination Versus Personal Rights and School Law

(City of New Braunfels et al. v. Waldschmidt et al. (Texas), 207 S. W. R. 303)

The Supreme Court of Texas reverses a judgment of the court of civil appeals, which (193 S. W. 1077) reversed a judgment of a lower court in favor of the defendants in this suit wherein the plaintiffs, Waldschmidt and others, attacked the validity of an ordinance adopted by the city council of the city of New Braunfels, providing that no person should be permitted to attend the public or private schools within that city, without presenting a physician's certificate to the person's vaccination within six years, and providing for the punishment, by fine, of any one on conviction of sending a child to any school within the city who had not been vaccinated, or on conviction of admitting a child into such school without a certificate of vaccination. The court says that the contention that this ordinance was inconsistent with the liberty guaranteed by the federal and state constitutions was too completely repelled by the opinion of the Supreme Court of the United States in *Jacobson* v. *Massachusetts*, 197 U. S. 22, 25 Sup. Ct. 358, to justify discussion.

If the plaintiffs, or any of them, had a right with respect to the children's school attendance, which could properly be considered a property right, this was held subject to a valid exercise of the police power of the state. Nor did the ordinance in any way undertake to control or interfere with any rights of conscience in matters of religion. Section 6 of the bill of rights in the state constitution does not relieve one from obedience to reasonable health regulations, enacted under the police power of the state, because such regulations happen not to conform to one's religious belief.

In the court's opinion, this ordinance was no more than a regulation deemed necessary and expedient by the city council to suppress the disease of smallpox in New Braunfels, and to promote the health of all the people of the city, and hence plainly within the scope of the power granted to the council, on which the state statute expressly conferred the power "to do all acts and make all regulations which may be necessary or expedient for the promotion of health or the suppression of disease." The court cannot assent to the proposition that with smallpox still in New Braunfels, and in other nearby communities, with which commercial and social intercourse was continuous, the trial court would have been warranted in declaring the ordinance unreasonable, having for its object to protect as far as practicable, by means of vaccination, the health and lives of the children and all the people of that community.

There was no conflict between this ordinance and the Texas law for compulsory education, for that law expressly exempts from its requirements "any child whose bodily . . . condition is such as to render attendance inadvisable." Certainly an unvaccinated child would come within that classification when those charged with the duty to protect the public health in his community had declared that before he could be considered bodily fit to attend school he must be vaccinated. The effect of the court's conclusions is not to impose compulsory vaccination on the minor plaintiffs, nor to subject their parent to prosecution if he withdraws them from school, because of his opposition to vaccination. It is simply to deny these minors the privileges of the schools until they comply with the ordinance passed for their own protection and for the protection of their families, along with all others residing in the community.

Must Have Prior Written Order for Services

(Lacy v. Monona County (Iowa), 169 N. W. R. 760)

The Supreme Court of Iowa affirms a judgment for the defendant county, in this action brought by a physician to recover for professional services rendered and medicine furnished to certain persons who were afflicted with smallpox and who were in quarantine; because there was no written evidence that the local board of health had determined the need of the services or had appointed the plaintiff to render them. The court says that the plaintiff was health officer, appointed by the township trustees. The services were rendered at the oral request of the township clerk and the board of trustees of the township, acting as a board of health. The bill as presented by the plaintiff to the board of supervisors, and the bill on which this suit was predicated, complied with all the requirements of the statute (Section 2571a of the Supplement of the Code of 1913), except that there was no written order designating the plaintiff as the person to furnish the services before the services were actually furnished, and no such order was attached to the bill or account when it was presented to the local board for audit and payment.

The statute does not directly say that bills shall not be allowed unless this order is attached; yet it is apparent that, in order to avoid frauds and impositions on the people of the county, the provision was made that, at the time bills for this kind of services were presented for audit and payment, there should be a written order, from either the board of health or its clerk, acting under proper regulations of the board, evidencing the fact that, before the services were rendered, the attention of the board was called to the fact of the need of the services, and that the board, in writing, ordered and directed the services to be rendered. It is no hardship to require one who seeks to hold another for services rendered, for which the one sought to be charged is only secondarily liable, to show that the authority to do the act was given him, in writing, by the body by whose authority it is sought to bind the party charged. So the rule is not unresonable, nor is it a harsh rule. It might in this particular instance work a hardship, but the rule is made for the protection of the public, and is general in its application, and is mandatory in its character, and therefore the fact that it works a hardship in an individual case does not deprive the rule of its efficacious qualities, or make it an unjust or unreasonable rule in its general application.

The facts on which the plaintiff relied were simply these: He was a practicing physician. He was appointed health officer under the local board of health, under the provisions of Section 2568 of the Code of 1897. But this health officer's fees or compensation are fixed by the local board. His duties do not require him to render services to the sick. His duties are to assist the board in discharging those duties which the law imposes on the board. There is nothing in this statute that extends to him the right to administer to the sick of the township at the expense of the county. When he renders services to those afflicted with contagious diseases, he is governed, like any other physician, by the provisions of Section 2571a. The liability of the county is purely statutory; and to render the county liable the requirements of the statute must be observed. The township boards of health, so far as they act in the matter, bind the county only by the observance of those conditions prerequisite to creating an obligation on the part of the county. Nor was it incumbent on the board of supervisors to inform him of the fact that he had not complied with the law, because that fact was well known to him, and, even, if it had informed him at the time it rejected his bill, he could not have remedied the fact by procuring an order at that time.

Loss of Eye Greater Than Loss of Sight

(Nelson v. Kentucky River Stone & Sand Co. (Ky.), 206 S. W. R. 473)

The Court of Appeals of Kentucky reverses a judgment that affirmed an award of the workmen's compensation board for the loss of an eyeball the same as for the loss of the sight of an eye. The court says that it must consider the case in the light of the board's finding that the man's eyeball was removed and he was compelled to wear a glass eye, but that neither of these things impaired his earning capacity beyond the loss of the sight of his eye, or caused a disfigurement that impaired his future usefulness or occupational opportunities. The question therefore was whether the award conformed to the Workmen's Compensation Act, and this depended on whether the injury fell within the specific schedule providing compensation for the loss of the sight of an eye, or under the general provision applying to all other cases. In this connection, it must be borne in mind that disfigurement impairing the future usefulness or occupational opportunities of the injured employee is not an indispensable condition to compensation under the general provision, since that provision applies "in all cases of permanent partial disability, including any disfigurement," etc. Hence the adverse finding of the board on this phase of the question was not controlling. Looking at the Kentucky act, we find that it provides compensation at a certain rate for "the loss of a thumb," the "loss of a first finger," the "loss of a hand," the "loss of an arm," etc., thus showing that the compensation therein provided for was confined to the loss of the particular member named. When it deals with the eye, however, it does not provide for compensation for the loss of the eye itself, but solely for the "loss of the sight of an eye." If it be true, and there is no reason to doubt the soundness of the rule, that the purpose of the legislature was to confine the fixed compensation provided for specific injuries to those injuries and no others, and that the compensation allowed for a specific injury was not payable for a less injury, the rule should work both ways, and the compensation provided for a particular injury should not be held to include a greater injury. Here, the employee lost, not only the sight of his eye, but the eye itself. His injury therefore was greater than the mere loss of the sight of the eye. That being true, his case did not fall within the schedule making compensation solely for the loss of the sight of an eye, but fell within the general provision awarding compensation "in all other cases of permanent partial disability," etc.

Proof Required in Case of Blood Test

(Hershiser v. Chicago, B. & Q. R. Co. (Neb.), 170 N. W. R. 177)

The Supreme Court of Nebraska holds that where it is sought to prove the result of a blood test, the testimony should negative the possibility of any interference with, or substitution of other blood for, the object of the test. The court says that this was an action for personal injuries alleged to have been caused by the detention of the plaintiff in a freight car whereby he became chilled and suffered a nervous shock and other injuries. A medical witness testified that the plaintiff was suffering from locomotor ataxia. Realizing that this condition might have resulted from a constitutional disease, the plaintiff had procured the Wassermann test for the presence of syphilis to be applied to a quantity of his blood drawn for the purpose of the test. It appeared from the evidence of the physician making the test that the blood, from the time it was drawn until the time the test was applied, was in the ice box of the laboratory, and that others besides himself had access to the laboratory, and that it would have been possible to have substituted another sample for the plaintiff's blood. On redirect examination the witness testified that the only persons who had access to the blood were men associated with him in his office, that he made no change in the blood himself, and that no one in his office did so to his knowledge. The defendent moved to strike out the testimony as to the test, for the reason that the possibility of a substitution of blood was not precluded by the facts shown. The motion was overruled, and this was assigned as erroneous. As a general rule, the probability of any tampering with the objects of such tests should be negatived before evidence of this nature is admitted. The only persons who had access to the laboratory were those associated with the physician. It would have been better to prove that the bottle and its contents had been absolutely undisturbed by ony one except the witness; but since another blood test was made under proper conditions, with the same result, under the circumstances it was not prejudicial error to retain this testimony.

City Not Liable for Negligence of Nurse in Hospital

(Browder et al. v. City of Henderson (Ky.), 207 S. W. R. 479)

The Court of Appeals of Kentucky affirms a judgment in favor of the defendant, which was sued for damages for the burning, with a hot water jug, by the alleged negligence of a nurse, of Mrs. Browder while she was a patient in the city hospital. The court says that it is committed to the rule that in the performance of public or governmental duties a municipal corporation cannot be made to respond in damages for the negligent acts of its employees, which, however, does not release the individual whose negligence has produced an injury from a suit at the instance of the person injured. Among its statutory powers, the defendant is given the right "to establish and erect hospitals," etc. In the management of its hospital the city is performing a governmental function just as much as in the operation of its city hall elevator, city prison, etc. Moreover, this court and other courts have held that the mere fact that the city may receive some pay or remuneration in the operation or maintenance of its public institutions does not take the case out of the general rule. And it is held here that the mere fact that some of the patients in the hospital were pay patients did not alter the rule, and the city could not be held for damages in this action.

Cannot Take Ethical Standing to Discredit Skill

(Washington & Old Dominion Ry. v. Warner (Va.), 97 S. E. R. 799)

The Supreme Court of Appeals of Virginia holds, in this personal injury case, that there was no error in a refusal of the trial court to admit evidence tending to disparage the professional standing of the physician who attended the plaintiff when injured, and, incidentally, to affect the reliability of his testimony. The supreme court of appeals says that the trial court refused to permit the witness to be examined as to the reasons why he was denied membership in the medical association of the city of Washington, and also excluded the evidence of a medical witness concerning his standing in the profession. The physician in question was a graduate of Georgetown University, and had practiced medicine about ten years; and the proposed attack was aimed rather at his ethical standing than his professional skill. A person may be a competent physician and yet disregardful of professional proprieties.

Society Proceedings

MISSOURI STATE MEDICAL ASSOCIATION

Sixty-Second Annual Meeting, held at Excelsior Springs, May 26-28, 1919

The President, Dr. M. P. Overholser, Harrisonville, in the Chair

Management of Streptococcic Empyema

Dr. H. P. Kuhn, Kansas City: The recent epidemic of influenza has given an opportunity for the study and observation of a large number of empyema and lung abscess cases under treatment in U. S. Army base hospitals. Each case eserves an intelligent, individual treatment depending on he pathologic condition, type of organism and constitutional condition.

Mechanics of Fluid in Pleural Cavity

Dr. Logan Clendening, Kansas City: There are six forms of fluid occurring in the pleural cavity. Much confusion has arisen owing to the fact that the distinction between free and fixed fluids has not been made sufficiently clear in either the textbooks or current literature. The diagnostic signs of fluid in the pleural cavity have usually been given as bulging intercostal spaces, dulness on percussion, shifting with change of position, absence of vocal fremitus and breath sounds over the fluid, displacement of the heart, the S shaped curve of Ellis and Grocco's sign. In pleural effusion and empyema the fluid does not usually change on change of position owing to the fact that these fluids are inflammatory in nature and cause adhesions between the visceral and parietal pleura, just as inflammatory fluids in the abdomen cause adhesions and are fixed by them. Breath sounds, râles and sometimes bronchial breathing are not infrequently heard over fixed fluids. Bronchial breathing is heard when the effusion is sufficiently large to press against a primary ronchus. However, the bronchial breathing is usually disant. The fact that in pleural effusion a comparatively large rea of dulness may yield on tapping on a small quantity f fluid can be explained on the basis of a thin layer of uid held in place by adhesions over a large area of chest. he irregularities of the outline of the adhesions holding up a pleural effusion or empyema helps to explain the failure of diagnostic tapping to reveal the presence of fluid. These facts are proved by the use of the roentgen ray and by careful postmortem examination.

DISCUSSION OF PAPERS BY DRS. KUHN AND CLENDENING

Dr. Hudson Talbott, St. Louis: Symptoms of fluid in the chest cavity arise principally through the compression and displacement of the organs. The sick side is usually considerably larger than the well side, although that may not always be noticed. The use of the cytometer helps, also the use of the lead strip to conform to the chest wall.

Dr. J. C. Lyter, St. Louis: Erdmann, at Camp Custer, was one of the first not to operate too early in empyema and not to operate in any case of pneumococcic empyema until the pneumonia had entirely cleared up. Especially should we consider the condition of the opposite lung because with the pneumonia not entirely cleared up, when the pus is removed from the opposite chest, the lung that had no empyema goes into a state of compensatory emphysema and the patient dies. As to the shifting of fluid in the chest, I agree with Dunham of Cincinnati that the only two fluids we see shift are the fluid that accompanies carcinoma and the fluid that has air with it.

Dr. N. I. Stebbins, Clinton: If we have more than one pus cavity we must treat each one separately. I have found it very successful to take an ordinary sized drainage tube, put a piece of rubber tissue in the palm of the hand, make a hole through the tissue about one-quarter the size of the drainage tube, and then by careful manipulation drawing the drainage tube through the tissue, which necessarily draws the rubber tisue up alongside of the tube and parallel with the tube. Then having made the resection, the tube is placed in the cavity.

Dr. Llewellyn Sale, St. Louis: Our experience was that a large number of cases went on to uneventful death—except that there had been some surgery done. In a number of these empyemas where we drained we found abscesses, collections of pus along the vertebral column, that were absolutely inaccessible irrespective of any method that might have been proposed under the present status of surgery. This makes us realize how helpless we are in the face of this overwhelming infection.

As for late operation, Dr. Lyter put his finger on the pulse of this problem. All of us, it seems, now favor late operation in empyema, but I would like to sound a note of warning, not for the purpose of differing with those who advocate late operation but that we may be able to use the lessons we have learned in this late experience. We must remember that cases operated on early during the empyema period of the disease came early in the epidemic of 1917. They were those fulminating, overwhelming infections from which the patient died in twenty-four to forty-eight hours, and from which the patient would have died and did die whether he was operated on or not. Statistics show a mortality of 50, 75 to 90 per cent. Then new methods were proposed, among them late operation, and then the reports began to get better, the mortality began to go down. Certainly part of the explanation is that the virulence of the infection began to subside, or that the individuals were able to build up a stronger resistance. I believe late operation is the safer step. As to movement of fluid in the chest, of course the main movement of fluid is that combined with air. In chylothorax the fluid changes just as rapidly as the pneumothorax, the level of the fluid being always horizontal, no matter what position. We thought that was due to the high percentage of fat in the exudate.

Neuroretinitis (Choked Disk) Sequel to Thyroid Extirpation

Dr. J. W. Sherer, Kansas City: A woman, aged 32, suffered severely with exophthalmic goiter. The thyroid gland was removed five years ago with complete recovery from all symptoms. For about five months she has been suffering severe asthenopic symptoms and during the last two months exophthalmos with swelling of the eyelids has developed. Pain through the left eye and the left side of the head is very severe. The fundus reveals the classic picture of neuroretinitis or choked disk. No hemorrhages occurred. Urinalysis and Wassermann are negative. The patient is nervous and emotional. The left eye has become totally blind during the last five days. The patient was put to bed on a restricted diet with bromids and alteratives. Pilocarpin sweats were given regularly. Complete recovery ensued in two months. Exophthalmos and choked disk disappeared.

DISCUSSION

Dr. E. H. Higbee, St. Louis: I do not think that this was a case of exophthalmic goiter. A negative Wassermann does not mean that the patient does not have syphilis. The fact that the patient was highly nervous can easily be explained in that she realized she had a serious eye trouble and had previously suffered from exophthalmic goiter. The quick recovery from such severe symptoms under potassium iodid and diaphoresis leads me to believe that this was not a sequel of thyroid trouble, but a gumma of the orbit.

Dr. J. W. Scherer: The patient did not have any treatment that could have cured her if this had been a neuritis of syphilitic origin. She had 1/100 grain of mercuric chlorid three times a day, for the first week only, and 5 grains of potassium iodid three times a day for three weeks. She got bromids for nervousness and sweats, regulation of diet and rest in bed and the inflammatory process in the optic nerve subsided.

Plea for the Early Recognition of Stomach Malignancies

Dr. E. H. Kessler, St. Louis: Some writers claim that 50 per cent. of cancers in the human race are situated in the stomach. The early symptoms of cancer may be those of an ordinary dyspepsia, but when these symptoms persist after a corrective diet the patient should be examined critically. The methods of examination are the history, the physical findings, the laboratory, the roentgen ray and the exploratory incision. The roentgen ray will show filling defects in 95 per cent. of cases by the time the patient calls attention to his stomach. Negative findings in doubtful cases are of value in excluding cancer. The roentgen ray shows whether the case is operable.

Dr. O. H. McCandless, Kansas City: Since the advent of the roentgen ray the demonstration of this condition has been made possible and the percentage of gastric ulcer and cancer has lessened materially. Intrinsic and extrinsic growths are demonstrated with considerable accuracy. The stormy intestinal tract is seldom malignant unless it is an obstructive process.

Dr. C. H. Neilson, St. Louis: I wish to call attention to the pernicious habit of diagnosing everything as gastritis. I wish we could get away from that and back to the old idea of a good examination. We must use the roentgen ray in conjunction with everything else that is to be used. The stomach tube has fallen into disuse because they say it gives us no knowledge. But it does give us a lot of knowledge which by using intelligently and interpreting properly will aid us in diagnosing early cancer. Every man or woman over 40 whose stomach is disturbed should be considered as having cancer until proved otherwise.

Dr. Elsworth S. Smith, St. Louis: After we have availed ourselves of every aid to diagnosis, we are still faced with a doubtful situation, just as has been shown here unless we can differentiate between the filling defects of simple ulcer and the filling defects of malignancy. Therefore I want to made a plea for early operative interference—exploratory operation—in these cases.

Dr. J. G. Sheldon, Kansas City: We are getting more late cases of carcinoma now than fifteen years ago. There are several reasons, and one is the supreme confidence of the roentgenologist to diagnose carcinoma of the stomach. The second reason is that people are too often prone to neglect medical findings. The roentgen ray is only part of the examination, but carcinoma of the stomach is a progressive and permanent disease that does not improve in two or three months.

So long as you find men who are willing to treat a stomach condition as long as the patient will stand for it we shall continue to get more and more late cases.

Osteosarcoma

Dr. E. B. Knerr, Kansas City: Bone tumors may now be diagnosed and differentiated by roentgenograms. I had a case which did not respond to palliative measures and incision but was apparently checked by roentgen-ray treatment. Later there was lung involvement but the patient refused further treatment.

DISCUSSION

Dr. L. A. Marty, Kansas City: Bone sarcomas are supposed to follow some trauma, but just how the action of trauma is concerned in the matter we do not understand. The prognosis of sarcoma of the shaft of the bone is usually bad because subjects under 20 years withstand the progress of malignant tumors very poorly. The outlook is very dark indeed from this class of disease when surgery is considered alone.

If surgery is never sure and offers only possibly an extension of life for a very few months, we are entirely justified in trying some other method of treatment; among these might be mentioned the roentgen ray, radium, and possibly some heat treatment. A thing that I would like to see tried out thoroughly is the diathermic treatment of malignancies: that is, the treatment by electrical heat, generally spoken of as electrothermic coagulation. It has been shown perfectly by Percy in his treatment of carcinoma of the uterus by heat, that cancer cells are killed at a very low temperature: a temperature that will not affect normal tissue cells.

Dr. J. G. Sheldon, Kansas City: I do not believe that the roentgen-ray treatment alone in sarcomas of the extremities, where amputation can be done and the soft parts removed, is very beneficial. I believe that the combined treatment with steam and electricity is the treatment of the future.

So-Called Irritable Heart of Soldiers

Dr. J. C. Lyter, St. Louis: After studying the subject in the military camp at Camp Custer, Mich., I am convinced that this syndrome, which was first described by Da Costa during the Civil War and by the French, English and American physicians during the recent war, is not a cardiovascular disturbance primarily but the disturbance of the autonomic and sympathetic nervous system. This syndrome occurs most often in the "hypoplastic" class of patients. The syndrome is a nervous disturbance most probably having its origin in a psychic disturbance resulting from a conflict of desires. The hypoplastic individual, having an unstable nervous system, manifests the symptoms more pronouncedly than other classes of individuals.

Dr. M. A. Bliss, St. Louis: An internist in France insisted that all these cases were hyperthyroid, while I insisted that relatively few were hyperthyroid. They are constitutional cases. You cannot make soldiers out of these men. No form of treatment changed these individuals, either physically or mentally, so as to enable them to be good soldiers. The important point to recognize is that they are constitutionally inferior and are not capable of such restoration as would make them efficient men.

Dr. C. H. Neilson, St. Louis: When the first soldiers were being examined in St. Louis I went so far as to accuse some one of giving these young men thyroid extract. We put many of them into the army. Some came back with "neuritis," some with "hyperthyroidism" and some with "constitutional disorders." Later I decided to put these individuals into limited service but I found that the limited service men worked just as hard as the regular soldiers. So we decided to send them back to their own work. A study of these individuals from the standpoint of body configuration will show that they belong in one of the types I have mentioned. We do not know what is wrong with these people, or that there is anything wrong with them, but I believe there is something behind it. I am not so enthusiastic as to attribute all these disturbances to the ductless glands.

Why Prenatal Care?

Dr. C. A. Ritter, Kansas City: Antenatal supervision urges necessity of early obstetric registration of all candidates for motherhood. Until recently prenatal supervision was conspicuous by its absence. Gestation in the majority of present day women is not a complete physiologic process. Motherhood exacts a most severe test of woman's physical and nervous make-up. Educate the public by prenatal propaganda and antenatal clinics and remind the profession of the dangers of maternity. Contribute to the development of better maternity nursing; increase the demand for hospital accommodation at delivery; raise the standard of obstetric work ; render elective procedures more frequent and obstetric surgery more successful as a life saving agent.

Dr. D. R. Parman, St. Louis: If the child within the abdomen is dependent on the mother for its material growth, then it is reasonable to suppose that a healthy mother will produce a healthy child. A thorough physical examination should be made early—not only an obstetric examination but a physical examination—to determine the condition of the patient in general. In that way we are often able to elect a procedure that will materially lessen the loss of life of the mother as well as of the infant. In more than 2,600 cities in the United States prenatal clinics with visiting nurses have been established. The statistics from the Visiting Nurses' Association in Boston show that the death rate has been reduced from 4 to 2 per cent. New York reports similar statistics. In Paris, in 1915, of about 18,000 births, 74 per cent. occurred in hospitals, and the mothers were also furnished nurses that would visit them and give instruction. By conducting these prenatal clinics the mortality of the mother was reduced 20 per cent. and that of the children 30 per cent., notwithstanding the strain and unusual conditions brought about by the war.

Dr. G. C. Mosher, Kansas City: Prenatal care, if it is to be carried out ideally, must be given in connection with either a hospital or a prenatal clinic. It ought to be easy to educate the women to come at least once a month for examination of urine, blood pressure, etc., and routine examinations would give each woman a chance to have discovered any thyroid condition, anything wrong with the teeth, heart, etc. The Children's Bureau of the Department of Labor has a very simple routine: first, general physical examination; second, measurements; third, continued supervision; fourth, examination of urine, blood pressure, etc. New York has adopted this plan and a Wassermann test is made in every suspicious case.

Dr. E. P. Hamilton, Kansas City: The general physical examination of the patient is most important. The Woman's Municipal League of Boston has kept track of 5,000 cases for five years. In the first year they had sixty eclamptic cases; in the next four years, four. In four years they had no miscarriages and only six cases of premature labor; 87 per cent. of the mothers nursed their babies. Physicians who do not have hospital facilities can educate the women to come to them for examination, for as soon as they understand that you are trying to make labor easier they will come.

Rôle of Vasomotor Response in Cardiac and Renal Decompensation of Hypertensive Cardiovascular Renal Disease

Dr. Elsworth Smith, St. Louis: Hypertension is never conservative but always ultimately destructive to the heart. Hypertension should always be reduced when vasomotor response is retained, thereby conserving cardiac and renal compensation and improving or restoring decompensation in these organs. To be treated successfully, hypertension should be detected early before becoming refractory so as to prevent ultimate disaster to the cardiovascular renal apparatus.

DISCUSSION

Dr. Llewellyn Sale, St. Louis: The interesting point in Dr. Smith's presentation is to realize that his observations represent the swinging back of the pendulum. Not so many years ago high blood pressure was looked on as a mark to be shot at. Then came a time when we were advised to leave high blood pressure alone. Now Dr. Smith and his collaborators advise us to lower high blood pressure when we come in contact with it and in the manner described. The important thing is the underlying principle. We must attempt to fix in our own minds, even though we cannot do it very accurately, some plan by which these people can be put into a class where high blood pressure or hypertension is the thing that really needs attention.

Dr. Elsworth Smith, St. Louis: My rule is to lower the blood pressure every time I see a patient with hypertension.

Extracardiovascular Causes for Angina Pectoris

Dr. P. T. Bohan, Kansas City: Coronary scleroris and Allbutt's theory of aortitis are important etiologic factors in most cases. That spasm of normal coronaries may account for attacks is questionable. Experience indicates that such factors as heart strain, obesity and areas of irritation in the region of the fifth nerve, and possibly also in the abdomen, not only may aggravate an angina due to coronary or aortic disease, but also cause typical angina vera without organic changes in the heart or aorta. Abscessed teeth and diseased tonsils have been known to act as etiologic factors.

Dr. Elsworth Smith, St. Louis: The extraneous causes of angina pectoris cannot be accentuated too greatly. The condition must be present for the development of angina and reflex foci set off the explosion. While it is possible that our ideas of coronary disease may be exaggerated, I am not disposed to discredit these causes.

Decision Regarding Use of Common Towels.—The supreme court of appeals of Virginia has rendered a decision construing the laws of Virginia prohibiting the placing, keeping, or use of common towels in any public lavatory in a case in which the manager of an office building rented offices to different individuals, the lavatories on each floor being kept locked and each tenant having a key. In a prosecution for an alleged violation of the acts referred to the court decided in favor of the accused, holding that the lavatories were not public lavatories.—*Public Health Reports,* March 14, 1919.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Diseases of Children, Chicago

June, 1919, **17**, No. 6

*Influenzal Croup. J. C. Regan and C. Regan, Brooklyn.—p. 376.
Some Graphs and Tables Illustrating Growth of Human Stomach. R. E. Scammon, Minneapolis.—p. 395.
*Fat Metabolism of Infants and Young Children. II. Fat in Stools of Infants Fed on Modifications of Cow's Milk. L. E. Holt, A. M. Courtney and H. L. Fales, New York.—p. 423.
Infantile Scurvy Associated with Hereditary Syphilis; Report on Breast Fed Infant with Multiple Fractures. R. M. Greenthal, Ann Arbor.—p. 440.

Influenzal Croup.—A series of twenty cases, of which five terminated fatally, was studied by the Regans. The causative agent of this particular form of croup is not the diphtheria bacillus. The bacterial flora found was very similar to that noted in general among influenza cases. Thus in the nasopharynx cultures there was a predominance of the Pfeiffer bacillus, pneumococcus, and *Micrococcus catarrhalis.* In the cultures from the sputum streptopnuemococci and Pfeiffer bacilli were most common, with pneumococci and staphylococci in less numbers. In the treatment of the malady it was found usually best to administer diphtheria antitoxin, owing to the difficulty of making a definite differential diagnosis from laryngeal diphtheria. The treatment which proved exceedingly effective was the use of steam inhalations carried out in a small room in which the saturation of the atmosphere with vapor could be controlled carefully. The results were very satisfactory, and a number of intubations were thus avoided. In addition to steam inhalations, flaxseed poultices were applied to the neck; morphin sulphate and atropin sulphate were given in doses proportionate to the age, to control the spasms and the restlessness. Intubation was required in six patients, one being an adult. The immediate effect of the introduction of the tube in most instances was to make the patient worse, and extubation had to be performed immediately in three cases. The harmful effect seemed to be due to the fact that the pressure of the tube increased the congestion existing in the mucous membrane below, further adding to the mechanical obstruction. Antipneumococcus serum was used in one case with very beneficial effects. Diphtheria antitoxin seems to have no effect on the local process.

Fat Metabolism of Infants.—The material presented in this article comprises the results of analysis of 128 stools of seventy-seven infants, whose ages ranged from 2 to 18 months, fed on modifications of cow's milk. The average fat percentage of the dried weight in normal stools was 36.2. The hard, constipated stools showed no variation from this figure. In the stools not quite normal in appearance the average fat percentage was slightly lower. In severe diarrhea the fat percentage of dried weight was much higher, reaching an average of 40.7 per cent. The soap percentage of total fat was very high in both normal and constipated stools, averaging, respectively, 72.8 and 73.8 per cent. As the stools became less normal in appearance the soap fat diminished rapidly and averaged in the loose stools only 30.6 per cent. of the total fat, in the diarrheal stools 12.4 per cent. and in those of severe diarrhea only 8.8 per cent. of the total fat. The neutral fat was less than 10 per cent. of the total fat in normal and constipated stools. It increased as the soap fat diminished and in diarrheal conditions made up about 60 per cent. of the total fat in the stool. The free fatty acids constituted about 17 per cent. of the total fat of normal and of constipated stools. It was increased somewhat as the stools became less like the normal and in the diarrheal stools was over 30 per cent. of the total fat of the stool. No definite relationship was shown between the daily fat intake and the percentage of fat or the distribution of fat in the stool. The average percentage of the fat retained with normal stools was 91.3 of the intake. The retention was but little lower when the stools were somewhat harder or softer than normal, or were not homogeneous, or contained more or less mucus without being distinctly watery. As the water in the stools increased, the percentage of retention dropped markedly, reaching in severe diarrhea 85.4 per cent. of the intake. There was no striking relation between the fat intake and the percentage of the intake retained, except when the intake was abnormally low.

Annals of Surgery, Philadelphia

May, 1919, **69**, No. 5

Influence of War on Development of Surgery. J. A. Blake, New York.—p. 453.

*Fracture of Femur. K. Bulkley and D. B. Sinclair.—p. 466.

Disinfection of Vitalized Tissues and Healing of Wounds with Chinosol and Salt. W. C. Lusk, New York.—p. 493.

War Wounds Treated with Dichloramine-T. P. G. Skillern, Jr., Philadelphia.—p. 498.

Etiology, Indications for Treatment, Behavior, and Post Operative Course of Empyema Thoracis. A. B. Keyes. Chicago.—p. 501.

Acute Dilatation of Stomach—Report of Case and Necropsy Findings. A. H. Harrigan, New York.—p. 510.

*Pyloric Stenosis in Infancy. F. O. Allen, Jr., Philadelphia.—p. 531.

Cholecystitis Following Typhoid in Childhood. H. C. Deaver, Philadelphia.—p. 534.

Primary Lymphosarcoma of Intestines—Report of Cases. W. H. Fisher, Toledo.—p. 537.

The Guillotine Amputation. T. G. Orr, Kansas City.—p. 543.

Fracture of Femur.—This paper analizes statistically 131 consecutive cases of fracture of the femur treated in the American Red Cross Military Hospital No. 2 at Paris. A brief outline of the principles and methods of treatment is also given. Of the 131 cases, 26 patients died, a mortality rate of 19.8 per cent. With the exception of one acute gas gangrene flaring up after a sequestrectomy and death occurring in the eighth week, all the late deaths were due to the streptococcus. There was one late death from tetanus, but in this case a positive streptococcus blood culture was obtained and at necropsy multiple streptococcus foci were found. The authors urge that a compound fracture of the femur should be operated on and held for a month, or immediately transported without operation to a hospital where definite treatment can be carried out. The chief danger lies in infection, gas gangrene in the early weeks and streptococcus in the later weeks. Both can be best combated by early, adequate, and radical surgery. The primary operative procedure should be radical to the point of apparent brutality. Amputation should be done oftener and earlier. Bulkley and Sinclair convinced that if more care were paid to operative treatment, less would be heard of the chemical treatment of wounds. Such treatment should be unnecessary.

Pyloric Stenosis in Infancy.—Allen cites a case in which he operated when the baby was three months old. Instead of the usual tumor, he found a distinct plication at the pylorus, the duodenum bent forward and adherent to the stomach for a distance of almost a quarter of an inch. The area was hyperaemic and there were definite cobweb adhesions. Allen divided the adhesions with scissors, and straightened out the pylorus.

Arkansas Medical Society Journal, Little Rock

May, 1919, **15**, No. 12

Medical Inspection of Schools in Extra Cantonment Zones in Arkansas. J. C. Geiger and H. I. Huntington, Little Rock.—p. 237.

Boston Medical and Surgical Journal

June 12, 1919, **180**, No. 24

Medical Aspect of Workman's Compensation Laws. J. W. Sever, Boston.—p. 655.

Physical Condition of New England Men Between Ages of 21 and 31 Years as Shown by Examinations Made for U. S. Army Under Selective Service Law During 1917 and 1918. I. W. Brewer, Watertown, N. Y.—p. 665.

Value of Artificial Pneumothorax Therapy as Associate Treatment of Pulmonary Tuberculosis. L. A. Alley, Rutland, Mass.—p. 663.

Conditioned Reflexes and Psychoanalysis. D. Gregg, Wellesley, Mass. —p. 669.

Progress of Orthopedic Surgery. C. H. Bucholz, Boston.—p. 670.

Florida Medical Association Journal, St. Augustine and Jacksonville

May, 1919, **5**, No. 11

Organized Medicine. F. J. Walter, Daytona.—p. 207.

Journal of Infectious Diseases, Chicago

May, 1919, **24**, No. 5

Influence of Incubation on Wassermann Reaction. E. H. Ruediger, Bismarck, N. D.—p. 405.

Proteus Group of Organisms with Special Reference to Agglutination and Fermentation Reactions and to Classification. I. A. Bengtson, Chicago.—p. 428.

*Precipitin Test for Blood in Feces. L. Hektoen, B. Fantus and S. A. Portis, Chicago.—p. 482.

*Spirochete of Infectious Jaundice (Spirocheta Icterohemorrhagiae, Inada; Leptospira, Noguchi) in House Rats in Chicago. A. Otteraaen, Chicago.—p. 485.

Agglutination of Streptococci. Y. Nakayama, Chicago.—p. 489.

Organisms of Secondary Infection, Especially Pneumococci and Streptococci, in Pulmonary Tuberculosis. H. J. Corper, W. G. Donald and H. W. Antz, U. S. Army Hospital, No. 16.—p. 496.

Precipitin Test for Blood in Feces.—According to Hektoen and his associates in this study the only conceivable practical value of precipitin tests for human blood proteins in feces would be in cases giving a negative result with a precipitin test and a positive Weber or benzidin reaction. Under these circumstances a negative result with the precipitin test would indicate that the positive chemical test probably was not due to the presence of human blood. Extracts of feces in salt solution often contain substances that form precipitate with antihuman serum. This seems to be the case just about as often in the case of healthy young men as of persons with various diseases. Such substances may be present in extracts of feces that do not give chemical tests for blood, and it may be inferred that such substances may be human proteins derived partly from the blood and partly also from the cells lining the intestinal tract. Extracts of feces of healthy men on unrestricted, full meat diet, only very exceptionally give positive reaction with antibeef, antisheep, antiswine and antichicken serums, showing that in health foreign proteins taken into the stomach as a rule do not reach the feces as such. In cases of pernicious anemia under treatment with arsenic the feces practically always give a positive reaction with antihuman serum.

Spirochete of Infectious Jaundice in Chicago Rats.—Spirochetes resembling those described as the cause of acute infectious jaundice were demonstrated by Otteraaen in only two Chicago house rats of thirty examined (or 6.6 per cent.), indicating that the spirochetes probably are not present in a high percentage of such rats. The spirochetes were demonstrated in material from the mouth and in tissue from the kidney. Because of the presence of spirochetes in the mouth of rats, Otteraaen suggests that it is possible that, at the time of the bite, organisms may be carried into the wound by the saliva or teeth, and disease in this manner transferred directly from the rat to man.

Journal of Nervous and Mental Diseases, New York

May, 1919, **49**, No. 5

*Pathologic Reflex of Great Toe: Reflex of the Second Phalanx. P. Boveri, Buenos Aires.—p. 385.

*The Dispensary and Psychiatry. M. Osnato, New York.—p. 391. To be continued.

Pathologic Reflex of Great Toe.—Boveri cites ten cases in which in the absence of the Achilles reflex, percussion of the Achilles tendon provoked flexion of the second phalanx of the great toe. He claims that this reflex is never present in a healthy person nor when the Achilles tendon reflex is present. The persons in whom this reflex was elicited had lesions of the spinal cord, the spinal nerve roots or the sciatic nerve, most of them being the result of war wounds, especially of the sciatic nerve. The reflex is said to be absolutely diagnostic of a partial lesion of the cord, sciatic nerve or of the scatic external popliteal. The patient is placed in the prone position with the legs bent back to a right angle on the thighs so that the letter "Z" is formed. Then the Achilles tendon is struck with a reflex hammer, and the effect on the toe is noted.

Dispensary and Psychiatry.—An analysis of 140 patients suffering from various psychoses was made by Osnato. They included cases of psychasthenia, late paranoid conditions, alcoholism and manic depressive insanity.

Journal of Orthopedic Surgery, Boston

June, 1919, 1, No. 6

*Nonoperative Treatment of Nerve Lesions Involving Upper Extremity. [illegible] Walter.—p. 320.
*Stiff Fingers Treated by Metal and Plaster Splints. P. J. Verrall. [illegible]
*[illegible] Correction of Weak Feet in Children. C. [illegible] New York [illegible]
*[illegible] by War Injuries. M. Langworthy.—[illegible]
[illegible] Services in U. S. Army Hospitals. R. B. [illegible]

Nonoperative Treatment of Nerve Lesions Involving Upper Extremity.—The treatment used by Hammond is the [illegible] Ford [illegible]. It consists in the relaxation of [illegible] by placing them in the position of physiologic rest which is taken up by the body when at ease, maintaining this position as long as is necessary.

Splint Treatment of Stiff Fingers.—The principal advantages claimed by Verrall for the treatment by metal splints are: 1. The power, that it is possible to exert is very great, but at the same time can be graduated to a nicety. 2. The [illegible] is gradual and continuous and consequently causes

DR. EL[illegible] pain and discomfort to the patient. 3. Movement
conservativ[illegible] is continued without removal of the splint and
Hypertension[illegible] movement is never lost. This is the most
response is re[illegible] all, the daily massage and movement
compensation an[illegible] essential part of the treatment. 4. The
these organs. To[illegible] with plaster, do not tend to slip off,
be detected early be[illegible] when any degree of traction is applied
ultimate disaster to t[illegible] Each finger is treated separately, and there-
[illegible] at different stages of treatment at
[illegible] splint.

DR. LLEWELLYN SALE, S[illegible]
Dr. Smith's presentation is[illegible] **Correction of Weak Feet in**
represent the swinging back [illegible] the articular surface of the head
years ago high blood pressure w[illegible] the navicularis, being careful to
shot at. Then came a time whe[illegible] small bone curet both these
high blood pressure alone. Now Dr[illegible] oughly curetted. When the
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Extracardiovascular Causes for Angina Pectoris

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Decision Regarding Use of Common Towels.—The supreme court of appeals of Virginia has rendered a decision construing the laws of Virginia prohibiting the placing, keeping, or use of common towels in any public lavatory in a case in which the manager of an office building rented offices to different individuals, the lavatories on each floor being kept locked and each tenant having a key. In a prosecution for an alleged violation of the acts referred to the court decided in favor of the accused, holding that the lavatories were not public lavatories.—*Public Health Reports,* March 14, 1919.

Military Surgeon, Washington, D. C.

June, 1919, 44, No. 6

Mobile Dispensing Stations. H. L. Gilchrist, A. E. F.—p. 543.
American Red Cross with the American Expeditionary Forces. F. A. Winter, A. E. F.—p. 548.
Field Hospitals. B. K. Ashford—p. 558.
Sanitation of a Field Hospital. H. Zinsser.—p. 571.
Surgical Treatment of Empyema of Thorax. H. Lilienthal.—p. 581.
Medical Department in Lines of Communication. F. A. Winter.—p. 588.
Graphic Method for Balancing the Army Ration. M. H. Jacobs.—p. 612.
Symposium in Regard to Amputation Cases. C. L. Lowman.—p. 617.
*Statistical Study of Prevalence of Intestinal Worms in Troops at Camp Zachary Taylor, Kentucky. B. Locke.—p. 621.

Intestinal Worms.—Over 15,000 soldiers were examined by Locke and others; of these 10,372 were white, 8,633 colored. All the white soldiers were residents of Kentucky; 6,948 colored soldiers came from Kentucky, 365 from Alabama, and 840 from Tennessee. Practically all were between 18 and 42 years of age and in good physical condition. It is emphasized that these men were soldiers in active service and presumably in good health. Therefore only men showing no appreciable signs of disease were examined. The parasites present were: hookworm (Necator americanus), roundworm (*Ascaris lumbricoides*), whipworm (*Trichuris trichiura*), dwarf tapeworm (Hymenolepis nana), beef tapeworm (*Taenia saginata*), Cochin-China worm (*Strongyloides stercoralis*). A marked difference in the frequency of infestation of white and negro soldiers was readily evident. Of the white soldiers 10.40 per cent. were infested; of the colored soldiers only 1.1 per cent. were infested. Two or more species of parasites in one person occurred 124 times. These concurrent infestations were only present among the whites.

Minnesota Medicine, St. Paul

June, 1919, 2, No. 6

Some Old Hospitals of London with Special Reference to Treatment of Fistula in Ano with Hemorrhoids. W. J. Mayo, Rochester.—p. 195.
History of Base Hospital No. 26. A. A. Law, Minneapolis.—p. 201.
*Results of Surgical Treatment of Spinal Cord Tumors. A. W. Adson, Rochester.—p. 203.
*Hemolytic Icterus: Two Cases of Splenectomy. J. P. Schneider, Minneapolis.—p. 210.
*Some Phases of New Children's Code of Interest to Physicians. W. Hodson, St. Paul.—p. 213.

Results of Surgical Treatment of Spinal Cord Tumors.—A series of sixteen cases in which laminectomies were *done* for spinal cord tumors is cited by Adson. The cases are said to represent fairly well the ratio of cord tumors to allied conditions, and the results accomplished by surgical treatment. Three patients recovered after the removal of the tumors, two have improved to such a degree that they are able to
In take up their regular work although there still *is some*
perc[illegible] weakness in one of the extremities. Two are slightly
percen improved; they are able to control bladder and bowels, but
average unable to work or go about. One patient improved
was very [illegible] edly for ten months and returned to his regular duties,
ing, respect[illegible] had a return of symptoms, and on recent *examination*
less normal in[illegible] ration a lordosis was found with *compression of the*
averaged in the There was no recurrence of a tumor but many
fat, in the diarrh[illegible] formed and destruction of the cord itself had
severe diarrhea onl[illegible] the lower part of the curve. This apparently
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normal and constipated[illegible] ed forward. In five cases in which it was
diminished and in diarrh[illegible] the tumors, an extensive decompression
per cent. of the total fat in[illegible] *left* unclosed. Two were cases of
constituted about 17 per cent. [illegible] a case of degenerative fibroma and
constipated stools. It was incre[illegible] that a diagnosis was not made.
became less like the normal and [illegible] finite history of lues that had
over 30 per cent. of the total fat [illegible] he also had a definite *sensory*
relationship was shown between the[illegible] tory operation was done and
the percentage of fat or the distributio[illegible] nd. It was not removed
The average percentage of the fat ret[illegible] *The patient made a*
stools was 91.3 of the intake. The retenti[illegible] able to go about his
lower when the stools were somewhat harde[illegible] oup gave a *definite*
normal, or were not homogeneous, or containe[illegible] ative exposure a
[illegible] as found. The

tumor was not removed on account of its extensive involvement in the cord itself; the patient has not improved. In the fifth case of nonremovable tumors, there was a definite history of syphilis nine years before with a development of a spastic paraplegia and a definite sensory level. A gumma of the cord involving the meninges was found. Again, results were unsatisfactory. In addition to the operations in the thirteen cases of spinal cord tumors, three cases in which the lesions were questionable were explored. A meningomyelitis, with increased cerebrospinal pressure was found. One patient did not improve, and gradually became worse; the second patient recovered and at present is doing his regular work, and the third died on the second day with a typical picture of fat embolism. This was the only death in the series.

Hemolytic Icterus: Splenectomy.—Schneider regards splenectomy as a cure for hemolytic icterus and urges that in all severe cases operation should be done. Gallstones, which complicate 60 per cent. of the cases, should be removed later.

Some Phases of New Children's Code of Interest to Physicians.—Of forty-one bills reported to the legislature by the Child Welfare Commission of Minnesota, thirty-five were enacted into law. These laws provided that mentally defective children may be committed through the probate court to the care and custody of the state board of control. This commitment may be by compulsion where necessary. All such commitments will receive attention by the board, either by institutional care for the most urgent cases, with special reference to girls and women of childbearing age, or by parole supervision in the community until institutional care can be provided. Physically defective children can be brought into the juvenile court when their parents will not secure proper medical attention for them. All maternity hospitals are licensed by the state board of control in addition to whatever regulation is provided by the board of health. All births in maternity hospitals must be reported to the board of control in addition to the board of health, and a statement must be made as to legitimacy. Rights and duties in a child can only be transferred by order or decree of court, usually the juvenile court. Fathers of illegitimate children should be made fully responsible, and mothers must nurse their babies while under the control of the hospital and as long thereafter as is possible and necessary.

Tennessee State Medical Association Journal, Nashville

May, 1919, **12**, No. 1

The Doper and the Doctor. S. T. Harrison, Lewisburg.—p. 20.
The Men Who Didn't Go.—By One of Them. H. Hawkins, Jackson.—p. 22.
Necessity of Making Blood Pressure Examinations of Persons of Advanced Age at Stated Intervals. D. Eve, Nashville.—p. 25.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Surgery, Bristol

April, 1919, **6**, No. 24

Pathology of Gunshot Wounds of Spine and Spinal Cord. W. Thorburn and G. Richardson.—p. 481.
*Restoration of Urethra by Means of Baer's Membrane. J. E. Adams.—p. 494.
Treatment of Functional Disability of Limbs in Special Military Surgical Hospital. W. C. Morton.—p. 497.
*Digestion of Esophagus as Cause of Postoperative Hematemesis. J. H. Pringle and J. H. Teacher.—p. 523.
Bones Showing Effects of Gunshot Injuries, in Army Medical Collection of Royal College of Surgeons of England. A. Keith and M. E. Hall.—p. 537. To be continued.
*New Method of Treatment for Suppurative Arthritis of Knee-Joint. J. Everidge.—p. 566.
War Contractures—Localized Tetanus, Reflex Disorder or Hysteria. A. F. Hurst.—p. 579.

Restoration of Urethra.—In Adam's case an artificial urethra was constructed by sewing a piece of Baer's membrane around a catheter.

Digestion of Esophagus.—The histories of fifteen cases encountered at the postmortem examination and in which it is considered most probable that digestion of the esophagus occurred during life, are cited by Pringle and Teacher. In eleven of these there was vomiting of brown or black material, or actual hematemesis. In eight cases the condition in the esophagus was advanced—destruction and perforation; in seven it was early. In eight there was no digestion of the stomach. In seven there was slight digestion of the stomach. In nine there had been operations, and in the six cases in which there had not been any operation there were similar changes in the esophagus. The vomiting of black material or actual hematemesis was observed in eleven out of the fifteen cases.

Suppurative Arthritis of Knee.—The "physiologic method," is the term applied by Everidge to this treatment, for the natural processes of repair enter largely into its rationale. It relies for its curative effect on active movements of the joints of the lower extremity, including the knee. It is emphasized, however, that adequate openings in the infected joint must first have been established to allow the free escape of synovia and pus; otherwise, movement will result in the dissemination of sepsis into culdesacs of the joint and extra-articular muscle planes. Active movement of the joint is begun soon after it has been operated on, and is regulated by the surgeon. In about 50 per cent. of the cases treated a useful mobile joint has been obtained. In the absence of extensive bone injury—which necessarily negatives this treatment—provided the physiologic method is established early, resolution is hastened and tracking is rare. Collections of pus in the popliteal space occur frequently. The method is impracticable if its adoption be delayed until the establishment of the fulminating stage of suppurative arthritis.

British Medical Journal, London

May 24, 1919, **2**, *No. 3047*

Diagnosis and Nomenclature of Disease. R. D. Rudolf.—p. 631.
Suggestions for Working of Venereal Clinic. E. F. Skinner.—p. 632.
Bacteriologic and Pathologic Observations on Influenza as Seen in France During 1918. W. J. Wilson and P. Steer.—p. 634.
*Anesthetics: Modification of Open Ether Method. J. F. W. Silk.—p. 635.
*Treatment of Eczema by Rectal Saline Injections. P. B. Spurgin.—p. 636.
*Unusual Case of Hemorrhage from Tonsillectomy. H. L. Whale.—p. 637.
Nerves in Amputation Stumps. E. M. Corner.—p. 638.
Jaundice: Types Occurring During War. W. H. Willcox.—p. 639.

Modified Open Ether Anesthesia.—Silk uses a mixture consisting of 1 dram of chloroform and 32 drams of ether. The patient should have a preliminary injection of morphin (1/6 to 1/4 grain) and atropin (1/100 to 1/60 grain). The face pad and mask is the same as for open ether, the mask being closely applied to the face and face pad from the very beginning. The liquid is used exactly as if it consisted of ether alone, the presence of the small quantity of chloroform being ignored. During induction the liquid is poured freely onto the mask just to the verge of resentment, but when consciousness and reflexes are abolished, it will suffice to reduce the supply to the dropping stage. The combination has given excellent results.

Treatment of Eczema by Rectal Saline Injections.—Spurgin reports a case of eczema in which a rectal saline enema containing 1 ounce of whisky was given every other day, after clearing the bowel with soap enema. The patient was apparently past all help when this form of treatment was commenced, and the really extraordinary change which took place in a few days, Spurgin says, was interesting and gratifying.

Unusual Case of Hemorrhage from Tonsillectomy.—In Whale's case profuse bleeding occurred from an aomalous tonsillar branch from the internal carotid.

Journal of Laryngology, Rhinology, and Otology, London

June, 1919, **34**, No. 6

Morell MacKenzie, Father of British Laryngology, Founder of "The Journal of Laryngology." J. Donelan.—p. 181.
Hysterical Aphonia in Soldiers. A. F. Hurst.—p. 189.

Journal of Tropical Medicine and Hygiene, London

May 15, 1919, **22**, No. 10

Model Mining Village in Tropics (Prestea, Gold Coast, Africa). W. E. Masters.—p. 89.

Case of Bilharzial Disease Treated by Intravenous Injections of Antimony Tartrate. G. C. Low.—p. 93.

Lancet, London

May 31, 1919, **2**, No. 4996

*Rôle of Sympathetic Nervous System in Glycosuria. W. L. Brown. —p. 923.

Jaundice: Types Occurring During the War. W. H. Willcox.—p. 929.

*Certain Chronic Colopathies: Origin and Clinical Evolution. E. Joltrain, P. Baufle and R. Coope.—p. 933.

Clinical Pathology of Thoracic Puncture Fluids. S. R. Gloyne.—p. 935.

Mild Bacillary Dysentery. J. Ryle.—p. 937.

*Case of Intussusception Treated by Resection. E. R. Flint.—p. 938.

*Improved Method for Estimation of Sugar in Urine and Blood. P. J. Cammidge.—p. 939.

Sympathetic Nervous System in Glycosuria.—The following classification of persistent glycosuria is suggested by Brown: 1. Organic origin, with structural changes in the endocrine glands leading to (*a*) overaction of suprarenal, thyroid, pituitary or (*b*) underaction of pancreas. 2. Sympathetic origin, with no evidence of structural changes in any endocrine gland, but producing a functional (*a*) overaction of suprarenal, thyroid, pituitary and (*b*) underaction of pancreas. This really makes spontaneous diabetes a disease of the sympathetic nervous system. Brown believes that diabetes is due to deficiency of the pancreatic amboceptor, which deficiency may be due to structural changes in the pancreas or to inhibitory action of the sympathetic on its internal secretion; this effect may be aggravated by sympathetic stimulation of other endocrine glands, thus further diminishing the power of carbohydrate assimilation.

Chronic Colopathies.—In a series of 102 consecutive cases of chronic colitis Joltrain et al. have been able to collect 73 cases in which the existence of an initial acute stage appears evident. Chronic colopathies appear in numerous cases to follow an acute dysentery (27 cases) or an acute dysenteriform colitis. It is classical that amebic dysentery often (38 cases) brings with it as sequel a chronic colopathy. The same trouble can be seen after dysentery caused by *B. shiga* (3 cases), a fact hardly noted up to the present. More rarely these chronic colopathies are consecutive to some other infection or intoxication (18 cases) which has caused a primary acute inflammation of the large intestine.

Case of Intussusception Treated by Resection.—Flint's patient was aged one day less than three months. He believes that this is the youngest case on record in which recovery took place. The ileum (4 or 5 inches of it) had slipped up into the cecum and colon. This portion of the ileum was removed in the usual way.

Improved Method for Estimation of Sugar in Urine and Blood.—Cammidge advises that when a urine is expected to contain a low percentage of sugar, under 0.5 per cent., and with all blood and other fluids containing smaller amounts, the water to which the iodin solution is to be added should be boiled thoroughly to expel dissolved air and cooled immediately before the estimation is to be made. It is also advisable that the alkaline copper solution for sugar estimations with urine should be boiled in a small conical flask provided with a loose funnel as a stopper instead of in a beaker, and that the required amount of urine should be run into the boiling fluid from a pipet when the air dissolved in the solution and contained in the flask has been expelled. With blood, etc., the 7.5 c.c. of filtrate and 1 c.c. of sodium carbonate solution are boiled together in a similar way in a small conical flask fitted with a funnel-stopper, and the 1 c.c. of modified Benedict solution is added after they have boiled for a few seconds. The water used for diluting the iodin solution and for washing out the flask, etc., should have been recently boiled and cooled. With these additional precautions the method gives uniformly reliable figures, even with the small amount of sugar in normal urine and blood.

Bulletin de l'Académie de Médecine, Paris

May 6, 1919, **81**, No. 18

*High Cesarean Section. P. Bar.—p. 572.

Consumption of Frozen Meat in France. Martel.—p. 584.

Lice in the Trenches. Chavigny.—p. 607.

*Measurement of Depth of Roentgen Shadows. M. de Abreu.—p. 608.

Calcareous Concretions in Lungs Simulating Fragments of Shells. Infroit.—p. 610.

Cesarean Section.—Bar has a record of 275 conservative cesarean sections done by himself or his aids, and he declares that this operation, although serious, yet is so certain in its results at the time and later, that it is justified in all cases where the anatomic conditions seem to promise difficult delivery requiring forceps or version. Also when conditions render rapid termination of the pregnancy or delivery desirable and the cervix is still resistant. Of course under the reserve common to all indications that there is no risk of infection. In 5 cases he practiced cesarean section on account of a prolapsed ovarian cyst. After evacuation of the uterus he excised the cyst, a simple intervention as cysts which allow pregnancy are generally free from serious adhesions. With a fibroma praevia the indications are the same, provided myomectomy is easy; if not, hysterectomy is usually indicated. He extends the indications far in cases of mechanical obstacle to delivery, but draws them very close in case of disease in the mother as the danger of infection is great here. With eclampsia, for example, the mothers are often infected, and cesarean section has given deplorable results. Some have reported a mortality of 48.2 per cent.; Williams has compiled 7 deaths from sepsis among 85 eclamptic women treated by cesarean section. Bar himself has done the high cesarean section only in 2 cases of eclampsia, and neither woman had fever; one had only the menace of convulsions and the other had had only a few, and the ovum was intact. With placenta praevia he would not venture high cesarean section unless the hemorrhage had been grave to start with, the cervix not dilated, the membranes not accessible. These conditions are so rarely encountered that he has done cesarean section only in 3 such cases during the last ten years. All the possible objections against prophylactic cesarean section are counterbalanced by the long list of mutilating interventions, gangrene of fibromas, torsion of cysts, and death of the children which have often followed expectant management.

Densimetry in Radioscopy.—De Abreu says that it is as absurd in roentgen work to be content with the usual record, "semi-opaque shadow," "veil," "completely opaque," etc., as it would be to say the patient has "a little temperature," "much temperature," "considerable fever," etc., instead of recording the degrees. A series of sheets of tin can be used for the densimeter scale, radiographing it at the same time as the part being examined. A still simpler device is to compare the shadows with certain bones. The ribs correspond to the shadow cast by 2 or 3 cm. of water; the clavicle to 4 or 6 cm. of water; the heart to 7 or 8 cm. of water; the ribs and clavicle superposed, to 6 or 9 cm. of water; the ribs and heart superposed, to 9 or 11 cm.; the liver to 15 or 20 cm. This anatomic scale is convenient, and the findings can be recorded by the figures representing the density of the corresponding water.

Journal de Médecine de Bordeaux

May 10, 1919, **90**, No. 9

Large Fibroma of Lower Segment of Uterus and Spontaneous Delivery. J. Andérodias.—p. 167.

*Protection of the Child against Criminal Abortion. Chambrelent. —p. 171.

Revitalization of Dead Tissue Implants. Bonnefon.—p. 179.

Protection of the Child Against Criminal Abortion.—Chambrelent quotes medical and legal authorities to show the prevalence of criminal abortion and the necessity for repressive measures. He argues that raising the standards and remuneration of midwives might have a favorable influence, as also the prohibition of the use of any instrument by them. He suggests the organization of the midwives of the district, and the exclusion from the organization of those guilty of criminal practices. This has proved of great help in Paris in the suppression of indecent advertising.

Paris Médical

May 3, 1919, 9, No. 18

*Indications for Operations in Diabetes. L. Blum.—p. 341.
*Diabetes and Acromegaly. M. Labbé.—p. 343.
*Glycemia. A. Baudouin.—p. 346.
The Creatin and Creatinin Content of the Urine. Rathery, Binet and Deffins.—p. 354.
*The Glycuronic Acid in the Urine. M. Chiray.—p. 359.

Operations on Diabetics.—Blum distinguishes between the surgical affections which are quite independent of the diabetes and those connected with the disease. The general rules of surgery apply to the former, but with the lesions determined by the diabetes or connected with it, preliminary dietetic treatment is imperative. In the milder forms of diabetes, the results can be only favorable. In the graver cases, energetic dietetic treatment should be given for forty-eight hours at most, carbohydrates one day, fasting the next. Then the operation should be done without further delay if it is deemed wise to attempt it at all. It has been his experience that surgical complications set up a vicious circle in diabetes. His experiments and clinical research have shown further that chloroform is especially harmful and should never be used for diabetics. Diabetic coma after ether is also not infrequent, although many surgeons have performed successful operations under ether. Local and spinal anesthesia would be preferable if it were not for the emotional shock of the intervention which counterbalances the advantages of abstention from general anesthesia. Sodium bicarbonate should be given by the mouth or vein as long as the danger of coma persists.

Diabetes and Acromegaly.—Labbé's case has already been mentioned in these columns, page 1786. Study of this and similar cases on record of associated diabetes and acromegaly confirms the existence of a type of nervous diabetes in which the disturbance in the control of sugar metabolism seems to be of the same nature as in liver or pancreas diabetes. It suggests that the sugar metabolism is under the control of a complex physiologic apparatus that comprises the liver, the pancreas, the nervous system and the ductless glands. Disease in any part of this apparatus may suffice to bring on diabetes.

Glycemia.—Baudouin found that in the healthy fasting subject the sugar content of the blood keeps tenaciously at about 1 gm. per liter. Above 1.3 or below 0.9 gm. indicates pathologic conditions. Every hyperglycemia, no matter how slight, is necessarily associated with an increase in the normal glycosuria. It escapes detection usually until the glycemia reaches at least 1.7 gm. The glycemia fluctuates widely in the same person with the diet but, to date, this has been studied only with carbohydrates. Ingestion, fasting, of 100 or 150 gm. of glucose showed a rise of from 1.12 to 2.32 gm. in one hour (five times the normal rise) in persons with intermittent or subcontinuous postprandial glycosuria. In four cases of continuous glycosuria, the glycemia averaged 3.7 gm. per liter but it ran up to 5.61 after the glucose test. These figures show that in studying diabetic glycemia one test does not signify much. In advanced diabetes the kidneys become so impermeable that the sugar content of the urine grows less and less although the glycemia grows progressively more pronounced. In conclusion he urges the importance of studying the blood as this is a living witness to what is going on in the interior of the body. Between the normal response to the alimentary glucose test and the extreme response in diabetes there is a transitional group, a condition of prediabetes, with a response midway between the others. He has obtained this response in certain cases of liver disease, of gout, eczema, neuralgia or obesity or manifestations of the arthritic diathesis. The high alimentary glycosuria and high glycemic coefficient is certainly significant.

Glycuronic Acid in the Urine with Liver Disease.—Chiray reports considerable experimental and clinical experience with tests for glycuronic acid in the urine in normal and pathologic conditions. He commends Roger's simple technic for the purpose, precipitating with subacetate of lead, centrifuging and adding naphtho-resorcin and hydrochloric acid. Glycuronuria requires an intoxication with the aromatic bodies and a defensive reaction on the part of the liver. He studied it in dogs, rabbits and guinea-pigs as well as in man, inducing experimentally the production of glycuronic acid by giving 0.5 gm. of camphor by the mouth or injecting camphorated oil. The reaction reaches its maximum at about the third hour. With marked insufficiency of the liver there was no response to ingestion of 0.5 or even 1 gm. of camphor. On the other hand, the response was always pronounced in pathologic conditions in which the liver functioning was not impaired. The bibliography appended cites only one American publication.

Presse Médicale, Paris

May 1, 1919, 27, No. 25

*Nerve Control of Movements of Head. L. Bard.—p. 233.
*Test for Activity of Gastric Juice. M. Loeper and M. Binet.—p. 235.
The New Treatments of Influenza. G. Lyon.—p. 236.
*Serotherapy of Erysipelas. A. Basset.—p. 237.
Tendon Anastomosis for Radial Paralysis. R. Massart.—p. 239.

Nerve Control of Movements of Head.—Bard's data and arguments apparently sustain his assertion that the external branch of the spinal accessory nerve is the nerve mainly involved in turning the head.

Test for Activity of Gastric Juice.—Loeper and Binet affirm that the hemolytic action of the gastric juice is a simple and practical means for estimating its potency. The rapidity and the intensity of the hemolysis are a reliable gage of the chemical activity of the gastric juice. They remove the plasma from 10 drops of human blood by rinsing three times in physiologic saline and centrifuging three times. Then they distribute the blood in test tubes containing dilutions of gastric juice from 1:4 to 1:10, in the proportion of 2 drops to 2 c.c., and incubate at 37 C. Normal juice, titrating 1 gm. HCl, hemolyzes the 1:4 dilution in fifteen minutes; a hyperactive juice in three minutes; an inactive juice not even in forty-five minutes. The hemolysis occurs the same whatever the source of the human blood corpuscles. The hydrochloric acid is evidently the main but not the sole factor involved. There was no evidence of hemolysis with this test in their cancer cases, but the hemolytic response was extremely intense with hyperchlorhydria and with gastric ulcer.

Serotherapy of Erysipelas.—Basset published last year the fine results he had obtained in various acute local infections, lymphangitis, anthrax, phlegmons, etc., from subcutaneous injections of a polyvalent antiserum (Leclainche and Vallée). He has since applied this treatment in sixteen cases of erysipelas and found it particularly rapid and effectual in its action in this disease, supplemented by local measures. The dose was from 20 to 40 c.c. of the antiserum, and the fever and the patch subsided in from two to six days. Painting with iodin twice a day seemed the simplest and most active of the local measures tried.

Progrès Médical, Paris

March 8, 1919, 34, No. 10

Sclerosis of Lung after Gassing. M. Loeper.—p. 89.
Congenital Hydrocephalus. H. Vignes.—p. 90.

March 15, 1919, 34, No. 11

Demineralization after Gassing. M. Loeper and G. Verpy.—p. 99.
Early Effect of Gassing on the Lung. P. Voivenel and P. Martin.—p. 99.
Tabetic Arthritis. Delbert.—p. 104.
Severe Fracture of Malleolus Heals under Massage. P. Japiot.—p. 106.
Syphilis and Belles Lettres. P. Voivenel.—p. 107.

Revue de Médecine, Paris

January, 1919, 36, No. 1. Pub'd May, 1919

*Hysterotraumatism. A. Pitres and H. Verger.—p. 4.
*Influence of Nervous System on Sugar in Blood. R. Lépine.—p. 48.
*Voltaic Inclination of Head and Trunk. L. Bard.—p. 73.
*Sequelae of Pleurisy. M. Péhu and M. Daguet.—p. 101.

Hysterotraumatism from Medicolegal Standpoint.—Pitres and Verger discuss traumatic disability from the standpoint of French law and recent court decisions, comparing the findings in civilian and military cases. Pitres' views were recently summarized in these columns, page 1706, in an abstract from an article by Cruchet. Pitres here remarks that since Sydenham called hysteria *la grande simulatrice,* because the symptoms which it induces often resemble those which develop in many other affections, it has had a very bad reputation. It has gradually been assumed that more or less simulation was a factor in all cases of hysteria, but when Pitres and Verger had over 15,000 men pass through their hands in the centre de neurologie of the 18 Région they soon saw the necessity for classifying the nervous post-traumatic cases in two groups, those with true and pure hysteria, and those of simulation, exaggeration or perseveration. They state that it is easy to distinguish between these groups. In the false cases the contractures are only vicious attitudes complacently retained. The "paralysis" is more a weakness, and it becomes manifest in walking or when there is work to be done with the arms. The algias increase in number and change location with each medical examination. There are no vasomotor, thermic or trophic disturbances, and the electric reactions are normal. The mental state is also different from the true hysteria cases; with the latter the men do not seek to inspire sympathy but seem normal and resigned, without excessive indifference. If there has been a psychic process in which the fear of the evil has engendered the evil, as some affirm, it occurred in the depths of the subconsciousness. Some recover rapidly, especially if treated soon after the injury; others have only gradually recovered in the course of years, while some are still in the same condition after years as during the first month after the injury.

Influence of the Nervous System on Glycemia.—Lépine reports the results of extensive experiments on dogs and describes the mechanism of the rise in the sugar content of the blood in consequence of puncture of the floor of the fourth ventricle, of concussion of the brain, of stimulation of the central end of the sciatic nerve, etc., and the hypoglycemia which follows puncture of the upper portion of the spinal cord. He adds that the disappearance of the sugar from the cerebrospinal fluid with syphilis of the nervous system may have differential importance, as in conditions with similar symptoms from other causes the sugar content is generally abnormally high, as in epilepsy, for instance.

Pathologic Modifications of Voltaic Inclination of Head and Trunk.—Bard refers to Babinski's work in this line of twenty years ago and describes different ways in which to elicit this test of disturbances in the labyrinth and gyration centers, and interpretation of the responses.

Sequelae of Pleurisy.—Péhu and Daguet have been studying the immediate and the remote sequelae of serofibrinous pleurisy and they discuss the relations between the radioscopic and the clinical findings. They were impressed with the complete restitution of normal conditions after a traumatic effusion while the effusion of a spontaneous pleurisy always leaves traces, some shadow or modification of the excursions of the diaphragm. Radioscopy is indispensable in internal medicine, they reiterate, and frequent radioscopic control is required particularly in pleurisy with effusion. They have had the opportunity to reexamine a total of 272 pleuritics after intervals of a few months up to twenty years.

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 5, 1919, **49**, No. 14

Serum of Pregnant Women Dissolves Out Non-Ionized Colloidal Iron Adsorbed by Various Substances. K. Kottmann.—p. 433.
*Puerperal Colon Bacillus Sepsis. W. Löffler.—p. 444.

Colon Bacillus Puerperal Sepsis.—Löffler reports a case in which pregnancy retinitis and optic neuritis compelled artificial abortion. This was followed by thrombophlebitis involving the vena cava, with terminal meningitis, for all of which the colon bacillus seemed exclusively responsible.

April 26, 1919, **49**, No. 17

*Herpes of the Cornea. Sidler-Huguenin.—p. 561.
*Prophylaxis of Endemic Goiter. R. Klinger.—p. 575.

Alleged Traumatic Herpes of the Cornea.—Huguenin presents arguments to disprove the assumption that trauma can be incriminated in the etiology of herpes of the cornea. It is an endogenous process, and a predisposition to herpes is an important factor. In 65 cases from his practice in the last twenty years, 28 had the herpes recur two or three times, and in 6 it returned *four times* in the same eye and in 8 cases the other eye was affected. In some of his cases there was no sign of herpes after a severe trauma of the eye, but it developed immediately after an intercurrent influenza. The first manifestations of the herpes are liable to resemble an erosion, and the subject at once begins to try to remember some accident to his eye. It is very suggestive, he adds, that in the 25 so-called traumatic cases of corneal herpes that he has encountered, the patients, with 5 exceptions, had all been insured against accidents. He adds that this does not necessarily imply malingering on their part, as workers are so liable to injury from flying scraps. In treatment, Huguenin advises bed rest and a light bandage over both eyes for a few days. The herpes may retrogress without loss of substance when the lesion is thus protected. He warns that yellow ointment is as harmful with herpes of the cornea as it is useful with other affections of the cornea. Moist heat is more effectual in aiding healing than yellow ointment. In any event it should never be massaged in. The prognosis is generally favorable if secondary infection can be warded off. Even if vision is impaired by a centrally located cicatrix, conditions may become materially improved in the course of one, two or three years.

Endemic Goiter.—Klinger describes the efforts in this line at Akron, Ohio, as reported in the *Archives of Internal Medicine,* **22**:41, 1918. He urges the adoption in Switzerland of similar measures, as the Akron experiments proved the absolute harmlessness of the measures enforced, namely, administration of 0.2 gm. sodium iodid daily, for ten days, spring and fall. Only 5 of the total 1,000 girls thus treated showed any signs of intolerance. The Akron experiment was described also in The Journal, Dec. 28, 1918, p. 2155.

Pediatria, Naples

May, 1919, **27**, No. 5

*Gonococcus Vulvovaginitis. S. Maggiore.—p. 257.
*Congenital Goiter. A. F. Canelli.—p. 264.
*Viscosity and Coagulability of the Blood. M. Sindoni.—p. 278.

Gonococcus Vulvitis in Little Girls.—Maggiore reports seven cases to illustrate the advantages of treatment of infantile gonococcus vulvovaginitis with tannic acid in powder form. The secretions in the vulva and at the opening of the vagina are washed off under a stream of 1 per twenty thousand solution of potassium permanganate, without pressure, and the parts are dried with cotton. Then they are dusted with a thick layer of tannic acid and a small pad of cotton is applied and held with a bandage. Each time the child urinates the powder is applied anew. It sticks long to the tissues and exerts a mild antiseptic action. The results have been very encouraging in his experience, the most rebellious forms of the vulvitis soon healing under this treatment. The children were from 5 to 10 years old and the disease was of one or two weeks' standing, and recovery was complete in from one to three weeks at most. This technic requires less manipulations than with fluids.

Congenital Goiter.—Canelli found the thyroid enlarged in 4 of 70 cadavers of infants prematurely born or living only for a few days. In 12 he weighed the thyroid systematically and found that it averaged 0.66 per thousand of the weight of infants born at term, and 0.256 per thousand in the prematurely born. Comparing these findings with similar data on record seems to establish that the maximal weight of the normal thyroid is 4.85 gm. In 4 of the 70 cadavers the thyroid weighed from 7.1 to 21.5 gm., the infants weighing only from 1,490 to 2,800 gm. No trace of iodin was found in the thyroid that weighed 7.1 gm., from an 8 months fetus, but 0.007015 gm. iodin was found in the largest thyroid, the infant born at about term.

Viscosity and Coagulability of the Blood in Different Diseases.—Sindoni records the figures for the viscosity and for the coagulating time in a number of children with pernicious anemia, chloroma, kala-azar, malaria or congenital heart disease, and also in three normal children. When the number of corpuscles is low, the viscosity is also much reduced. The coagulation time is slightly retarded as the viscosity grows less. In kala-azar, under tartar emetic treatment there was no modification of the coagulability.

Policlinico, Rome

May 4, 1919, **26**, No. 18

*Measurement of the Heart. P. Alessandrini.—p. 545.
Influenza and Its Causes. S. Belfanti.—p. 548.
Pseudosuicides. A. Carelli.—p. 559.

Measurement of the Heart.—Alessandrini tabulates the findings in nine typical cases of different forms of valvular disease and compares them with Clayton and Merrill's table showing the longitudinal and transverse diameters, the product of the two, and the index, which represents the ratio between the two. The highest figures were obtained in a case of aortic insufficiency plus mitral stenosis, the longitudinal diameter being 17, the transverse 16.5, their product, 280.50, and the index 0.97. An index above 0.96 is always pathologic, as it testifies to enlargement of the right heart. A normal index with high product indicates a total enlargement of the heart cavities. With enlargement of the left half alone, the index is low. Radioscopic measurement of the heart in this way classifies the case at once.

April, 1919, **26**, Surgical Section No. 4

*Classification of Cases of Enlarged Prostate. E. Pirondini.—**p. 113.**
*Projectile near Sacral Vertebra. D. Taddei.—p. 140.
*Phlegmons of the Pharynx. B. Masci.—p. 146.
Stenosis of the Esophagus. A. Austoni.—p. 150. Cont'n.

Indications for Operation with Enlarged Prostate.—Pirondini has been applying his method of experimental azoturia in the classification of "prostatics," and has drawn what he thinks are important deductions therefrom in regard to the treatment. This is particularly important as the kidneys suffer more than any other organ from the effects of transvesical prostatectomy, and as the ureter catheter cannot be used with hypertrophied prostate, and both kidneys generally have been more or less damaged in consequence of this hypertrophy. He applied the test in 40 cases of hypertrophied prostate, and also in a number of other persons normal or with kidney or bladder disease. (The test is ingestion of 10 gm. urea, in 300 c.c. distilled water, as described in THE JOURNAL **68**:496, 1917.) This is a physiologic functional test, as urea is a natural constituent of the urine. He found that 45 per cent. of the prostatics responded normally to the test azoturia; 32 per cent. gave a very defective response, and the rest gave an intermediate response. They could thus be classed in three groups. Those in the first group with limpid urine outside of the periods of acute retention, with normal response to the test azoturia, should be operated on at one sitting, unless there are special visceral lesions. With a defective or very bad response to the urea test, the operation should be done in two sittings, and there should be a period of preparation, retention catheter and hypogastric drainage. In this group, with very bad response to the urea test, the benefit on the part of the kidneys from the preparation may not be so great as anticipated. The general improvement may far surpass the improvement in the kidneys, and this may render the operation a success. The patient may long survive without ever presenting symptoms of renal insufficiency, although it is scarcely probable that the functional balance has been completely restored. An operation at one sitting might be justified even for prostatics with a rather poor response, provided the preparation for the operation had been long and thorough. This functional subdivision of cases of hypertrophied prostate into three groups or stages is thus a reliable guide for the management of different cases, as he shows by the detailed history and the outcome in a number of instances.

Projectile in Front of Fourth Sacral Vertebra.—Taddei successfully removed the projectile and cured the old fistula by an ischiorectal incision. Linear incision of the rectum and simple section of the anus does not seem to interfere with defecation later.

Phlegmons in Pharynx.—Masci found streptococci in the acute idiopathic phlegmons in the pharynx of the man of 57. Incision of the phlegmon gave great relief, but the man died a few days later. No treatment to date has proved effectual in these cases, but antistreptococcus serum, intravenous injection of colloidal metals, heart stimulants, and ice should be tried, with other general and local measures.

Annaes Paulistas de Med. e Cirurgía, S. Paulo, Brazil

January, 1919, **10**, No. 1

Influenza at S. Paulo. L. Torres.—p. 1; R. Puech.—p. 14.
*Cysticercus in Eyeball. P. Gomes.—p. 17.

Cysticercus in Eyeball.—Gomes' description of two successful operations for cysticercus in the eyeball is given only in Society Proceedings as he reported the cases to the local medical society. The larva was in the anterior chamber in one man of 30 and free in the left vitreous humor in the second case, the patient a man of 32. The operation was like that for cataract in the first case, but in the second case Gomes was much gratified by the success of the special method used. Instead of puncturing the sclerotic he made a small radial incision, then had the patient raised to a sitting position, keeping the head bent over low to the left, the eyeball still turned upward and inward, toward the frontal sinus. With the ophthalmoscope it was then verified that the cysticercus was close to the incision. An attempt was made to grasp it with iris forceps but proved unsuccessful. A second introduction of the forceps, however, seized the larva and it was easily drawn out through the minute incision. The patient was then placed horizontal and the incision was sutured with U stitches of fine silk. The sclerotic did not have to be sutured as the radial incision had been made in the same direction as its fibers. Although echinococcus disease is comparatively frequent in Brazil, he knows of only one other case of intra-ocular cysticercus in the entire country.

Archivos Españoles de Pediatría, Madrid

February, 1919, **3**, No. 2

*Gastro-Intestinal Catarrh. F. C. Aguilar.—p. 65.
*Congenital Dislocation of Hip Joint. J. Riosalido.—p. 80.
*Intubation in Diphtheria. S. G. Vicente.—p. 86.

Gastro-Intestinal Catarrh.—Aguilar discusses whether catarrhal conditions necessarily imply infection, and whether infection always induces catarrhal conditions in the digestive tract. He says that neither question can be answered summarily in the affirmative. The catarrhal condition is primarily physiologic, and infection may exist without symptoms indicating a catarrhal state in the digestive tract. He has had cases of gastric or intestinal catarrh in which the only symptom seemed to be fever. In some cases it reached 39 C. and was frankly intermittent.

Congenital Dislocation of Hip Joint.—Riosalido does not follow Lorenz' technic but makes the reduction systematically by way of the notch below instead of by the posterior margin of the acetabulum. The leg is flexed on the trunk, while an assistant holds the pelvis firm by the crest of the ilium on each side. The leg is flexed on the pelvis until the anterior internal aspect touches the trunk. This brings the head down in front of the notch and with brief abduction it slips into the socket. He has never had occasion to push up the trochanter to accomplish this, but would not hesitate to do this in difficult cases. He never does myorrhexis like Lorenz, but insists that it is very important to respect the muscles. He applies the plaster cast in Wendorf's position, that is, flexion at an acute angle, abduction less than 90 degrees and inward rotation. The cast should include the leg to below the knee and the pelvis to the ribs. In four months this cast is changed for one that allows a more normal position. In one case in which the first cast had been worn for more than four months the retraction of the muscles was so extreme that the change to the second position had to be done extremely gently and cautiously, at two sittings, to avoid fracturing the bone. When the second cast is removed, after three or four months, then vigilant supervision is imperative. The child must avoid flexing the hip joint, especially by sitting on a low seat. When the child sits down the seat must be high, and the child must sit only on the edge of the seat. In walking, the knee and hip joint must be held stiff, and only short steps taken, at first very slowly, the hands held high by an older person. After a week the child can walk alone aided by long poles which force it to hold the body erect. No massage or special exercises are enforced. The child under vigilant supervision gradually recovers the full functional use of the limb. With a unilateral process, he allows the child to walk while it is in the second cast, the foot raised. In one bilateral case sciatic paralysis developed with pain, fever and other symptoms suggesting meningitis until the immobility of the toes attracted attention. The sciatic nerve had evidently been compressed. In another case there was tardy deforming osteo-arthritis of the joint involved.

Intubation in Diphtheria.—Vicente believes in leaving the tube tranquilly in the throat, changing it occasionally for a larger size, and keeping the child well fed and out of doors where it can run and play. When the tube is finally discarded, he says, *vigilancia exquisita* is indispensable. This care of the intubated child is easily realized in proper institutions but is much more difficult in the home.

Brazil-Medico, Rio de Janeiro

April 5, 1919, **33**, No. 14

Flagellate Parasite of Rhinocricus. (Octomitus minimus **n. sp.**) G. Hasselmann.—p. 105.
Syphilitic Fever. J. C. Ferreira.—p. 105. Conc'n.
*Serodiagnosis of Superficial Leishmaniosis. A. Moses.—p. 107.

April 12, 1919, **33**, No. 15

Administration of Mercury. M. Mourão.—p. 113.
Double Dolichopododactylia in Negro. A. F. de Magalhães.—p. 116.

Serodiagnosis of Superficial Leishmaniosis.—Moses obtained a positive deviation of complement in 80 per cent. of the cases of "tegumentary leishmaniosis" examined. It is a group reaction which is quantitatively different from a specific reaction, but the test with other affections, bacterial or not, was invariably negative.

Medicina Ibera, Madrid

March 29, 1919, **6**, No. 73

*Radium and Dermatology. E. A. S. de Aja.—p. 269. Conc'n.
Pulmonary Tuberculosis Simulating Malta Fever. A. N. Blasco.—p. 272.
*Paranoia. S. Herreros.—p. 277.

Radium in Dermatology.—De Aja here reviews his extensive experience with radium treatment of skin lesions and diseases in the last two years. Epitheliomas, without reaction in the glands, subsided almost constantly under radium treatment, as also in the graver cases when associated with operative measures. Even in the inoperable cases, the relief of pain and hemorrhage and suppression of secondary infection afford great benefit. Radium proved inferior to the roentgen rays as a depilator, and also in treatment of pruritus. The action is slow in lupus but reliable, and only occasional success was realized in common eczema, but in the lichenoid form the results were brilliant, as also with eczematids, and in eczema of hairy regions. Seborrhoids heal under radium and effectually, but the most unexpectedly brilliant results were obtained with ordinary suppurating lesions of the skin, pyodermatitis. He emphasizes that the indications in this line should be extended.

Paranoia.—Herreros expatiates on the necessity for recognizing early a tendency to paranoia and warding it off by instruction and training. A simple defect in character may become transformed into mental derangement by some trivial cause. In the period of delirium, the physician cannot aid much except by combating the hallucinations. Sedatives may give great relief, but the delirious ideas should not be discussed. The persons that develop ideas of persecution have usually been timid, self-centered, querulous persons, not making the effort necessary to "take a high place at the banquet of existence." A physician's advice and sympathy at this time might divert the patient's ideas into wholesome channels. Auditory hallucinations are a potent element in the development of delirium, and for this and other reasons cited the incipient paranoiac should be placed in the institutional charge of a good alienist where he will get the food, the quiet, etc., needed.

April 5, 1919, **7**, No. 74

*The Stomach Tube. F. F. Martinez.—p. 1.
Hemorrhagic Pleurisy. G. Triviño.—p. 4.
*Malignant Pterygium. G. González.—p. 5.

The Stomach Tube.—Martínez compares various methods for catheterization of the stomach and states that he prefers a rather stout tube, No. 12 or 13, the hardest to be obtained. He never calls on the patient to swallow the tube but bids him to keep passive. All he has to do is to concentrate his energies on breathing deep and forcibly.

Malignant Pterygium.—González reports a case in which an extensive pterygium had returned five times after operative removal, and enucleation of the eye was being considered on account of fear of a malignant nature. Then he severed the large vessels nourishing the pterygium, an actual peritomy, and injected into the center of the pterygium 3 or 4 drops of a 3 per cent. solution of a preparation of thiosinamin. In the course of forty days nine injections were thus made at different points in the pterygium, increasing the strength from 3 to 10 per cent. as it atrophied. The retrogression is complete but the relics of the five operations are irreparable although the visual field has become larger and the movability of the eye greater. There has been no trace of recurrence during the months since.

Plus Ultra, Madrid

January, 1919, **2**, No. 7

Bacteriologic and Clinical Study of Influenza. P. Mayoral, R. Lobo, J. Olano, E. M. de Nicolás and J. González.—p. 5.
*Functional Exploration of the Duodenum. F. F. Martínez.—p. 14.
*Treatment of Convergent Strabismus in Children. Cilleruelo.—p. 18.
*To Estimate Blood Lost in Hemorrhages. M. Sáiz.—p. 23.
Sensory and Motor Disturbances in the Larynx. Prada.—p. 24.
*Dissection of Biliary Passages. P. Belou.—p. 33.
*Implant in Treatment of Hernia. A. H. Carmona.—p. 34.
*Differential Diagnosis of Neurasthenia. C. Juarros.—p. 45.
Psychology of Regicides and Magnicides. A. Lecha-Marzo.—p. 48.
Modern Medical Electric Apparatus. F. Reber.—p. 51.

Exploration of the Duodenum.—Martínez describes the simple technic with which he obtains duodenal contents and applies the tests for the various ferments, cholesterol, etc. He uses a heavy perforated metal capsule, about 1 by 2 cm., formed of two cups that screw together. The only test meal, he says, that does not clog the openings is a couple of eggs beaten up in a pint of milk.

Convergent Strabismus.—Cilleruelo discusses the different technics in vogue for treating strabismus in children, and declares that simple or double tenotomy is the best and safest.

To Estimate Quantity of Blood Lost in Hemorrhages.—Sáiz remarks that the number of corpuscles in the blood after a hemorrhage is necessarily much reduced although the total volume of the blood fluid soon returns to normal. Comparing the number of reds found after the hemorrhage with the normal number, gives an approximate estimate of the amount of blood lost. Calling the normal percentage of reds 100, then the proportional percentage with only 3,968,000 reds, as in a case described, was 82.66. This means that there had been a loss of 17.34 per cent. of the reds. Accepting Cardenal's figure that the total amount of blood is $1/47$ of the body weight, then in this patient, who weighs 58 kg., it is easy to calculate from this that the amount of blood lost equals 591.46 c.c.

Dissection of Biliary Passages.—The two large colored plates showing the gallbladder region and the foramen of Winslow are not accompanied by much text as they speak for themselves. They seem to be fine specimens of color photography, nearly life size.

Implant to Reenforce Herniotomy.—Carmona has been applying in treatment of inguinal hernia the results of the research of Leriche and others in regard to the ossification liable with an implant of periosteum. He gives eight illustrations showing the exact technic. The rectangular strip of periosteum, about 3 by 6 cm., is cut from the periosteum of the tibia on the inner aspect of the leg, below the knee. After the herniotomy has been completed in the usual manner, he applies this strip of periosteum over the other suture, holding it in place with a stitch near each corner. In seven of eight cases in which this method was applied the implant healed in place by primary intention and there has been no disturbance of any kind since. The region of the herniotomy is tough and resistant, flexible at first but gradually becoming extremely hard, of a fibrous consistency. One of the patients was operated on by this technic on one side and without the implant on the other side, and there is already recurrence on the latter side. The fibrous hardness of the implanted side absolutely prevents any tendency to recurrence of the hernia.

Diagnosis of Neurasthenia.—Juarros warns that we must first of all determine whether the neurasthenic symptoms may not be the work of malaria or other constitutional disease, or the incipient phase of general paralysis or dementia praecox. He cites some typical examples in which examination of the stools revealing insufficiency of the pancreas permitted effectual treatment, with the vanishing of the assumed neurasthenia. Or the supposed neurasthenia proved to be the result of oxaluria, and subsided when this was conquered. The questions are: Is there such a state of fatigability of the nervous system as to justify the assumption of neurasthenia, and is this neurasthenia constitutional or acquired?

Prensa Médica Argentina, Buenos Aires

April 10, 1919, **5**, No. 31

Research on Electric Stimulation of Muscles in Frogs, etc. J. Guglielmetti and G. Pacella.—p. 301.
Hydatid Cyst of Liver with Cirrhosis. P. M. Barlaro.—p. 306.
Nerve Elements in Auriculoventricular Bundle. Id.—p. 306.

Revista Medico-Cirurgica do Brazil, Rio de Janeiro

February, 1919, **27**, No. 2

*The Public Health in Brazil during 1918. T. Torres.—p. 29.

The Public Health in Brazil During 1918.—Torres is the newly appointed chief of the public health service. Director geral de Saúde Publica is his official title, and he outlines here the pressing needs of the service and gives the statistics for Rio de Janeiro during 1917 and 1918. There were no deaths from yellow fever or cholera in either year and only 2 from scarlet fever in each year, but whooping cough was responsible for 209 and 182 deaths; pulmonary tuberculosis for 4,034 and 4,706; puerperal fever for 77 and 91; rabies for 8 and 3; and syphilis for 270 and 378. The great increase in the death rate was due to influenza. His statistics cite 411 deaths from "grippe" in 1917 and 12,622 in 1918, in a total mortality of 21,508 and 34,894 in the respective years.

Semana Médica, Buenos Aires

April 3, 1919, **26**, No. 14. Penna Memorial Number

Dr. José Penna, D. Decoud and others.—p. 331.
Frontal Mucocele. R. Becco.—p. 341.
The Ideal City. E. R. Coni.—p. 342.
*Direct Treatment of Pulmonary Tuberculosis. G. Escobar.—p. 345.
Physicopathology of the Aviator. J. A. López.—p. 349. Cont'n.
Radiography of Ventricles of the Brain. C. Heuser.—p. 352.

Intrapleural Treatment of Pulmonary Tuberculosis.—Escobar asserts that the intrapleural method of treating tuberculous processes in the lungs is certain to have a promising future, as it is the most direct mode of access to the lung; as the pleural serosa abounds in lymphatics connecting with the lungs; as it is permeable, and thus facilitates the exosmotic action of the medication on the lung tissue, and, finally, because the effusion which collects at once makes the treatment painless. He affirms further that tincture of iodin is the preferable topical treatment on account of its local and bactericidal action, its diffusibility, absorption and rapid elimination, and the way in which it modifies the soil. He gives the details of a case thus treated with 188 c.c. of tincture of iodin fractioned in twenty-two doses in the course of seven or eight months. About 3,630 c.c. of pleural effusion were withdrawn during this period. The young man had not been able to work for two years and tubercle bacilli were numerous in the sputum, but under this treatment and other measures he has apparently regained complete health and earning capacity.

Grèce Médicale, Athens

Jan. 1-15, 1919, **21**, Nos. 1-2

Successful Roentgen Treatment of Hypertrophied Tonsils. J. Cécikas. —p. 1.
*Autoserotherapy of Influenza. T. Anastassiadès.—p. 4.
Equipment for Prophylaxis of Rabies. J. Foustanos.—p. 6.
*Lethargic Encephalitis. G. Karyophyllis.—p. 8.
*Influenza. P. J. Rondopoulos.—p. 9.

Autoserotherapy of Influenza.—Anastassiadès reinjected the patient with the serous fluid from an induced autoblister. The mortality in 234 patients thus treated was 6 per cent. When the small disk of blistering plaster applied to the chest fails to induce a blister, the outlook is grave. He aspirates from 0.3 to 0.5 c.c. of the blister fluid and mixes it with strychnin, caffein or morphin according to the special indications at the time. The mixture is then injected at three points, above the blister region on each side of the chest, and in the abdomen. The effect was apparent at once, he says, and in thirty-six or forty-eight or even in twelve hours the temperature declined and the improvement progressed.

Lethargic Encephalitis.—The three cases described are the first recorded in Greece. The patients were young adults and the first symptoms appeared late in September or early in October, 1918. The two women died; the youth of 17 left the hospital about twenty-eight days after the symptoms had first appeared. He had not entirely recovered the use of his legs and the atrophy of the optic nerve was such that he could only distinguish day from night. His lethargy with closed eyelids lasted for over two weeks.

Influenza in Greece.—The first wave of influenza in June and July was comparatively mild, but the October wave had a mortality of 15.5, 22.7 and 24.23 per cent. in different localities. The maximum mortality was in the army hospitals, reaching 50.7 per cent. in some of the hospitals at the front.

Kitasato Archives of Experimental Medicine, Tokyo

April, 1919, **3**, No. 1

*Anaphylactoid Reaction to Arsphenamin. N. Hirano.—p. 1.
*Spirochete of Relapsing Fever in Manchuria. H. Toyota.—p. 43.
*Experimental Study on the Mixed Injection of Bacillus Influenzae and Various Species of Cocci. S. Yanagisawa.—p. 85.

The Anaphylactoid Reaction to Arsphenamin. — Hirano entitles his article, which is in English, "Experimental Studies on the Investigation of the Nature of Anaphylactoid Caused by the Repeated Injection of Salvarsan," explaining this as the sudden congestion of the face, feeling of oppression in the chest, dyspnea, cough, and pain in the back, with a sensation of distress, which may develop during the infusion but disappears afterward without ill effect. He reviews the literature on the subject, and reports experimental research which sustains Milian's statements in 1913 to the effect that preliminary injection of epinephrin will ward off these symptoms. Hirano's work was done on large numbers of rabbits, and the results of the tests are tabulated. They show that a remarkable decrease in the chromaffine substance in the suprarenal glands follows intravenous injection of a large quantity of either arsphenamin or neoarsphenamin, and intravenous injection of even a therapeutic dose of arsphenamin is followed by a reduction in the epinephrin content of the suprarenals. The epinephrin content of the blood decreases at once after injection of either but increases again a little later. The epinephrin content of the suprarenal glands of rabbits after the three weekly intravenous injections of 0.02 gm. per kilo body weight was sometimes found higher than in normal animals. But no remarkable decrease in the epinephrin content of the suprarenal glands followed a therapeutic dose of arsphenamin given animals so treated, and no difference from normal animals was noted after a therapeutic dose of neoarsphenamin. On the other hand, after three weekly intravenous injections of 0.03 gm. per kilo body weight, the epinephrin content does not differ from that of normal animals, but if a therapeutic dose of neoarsphenamin is given to animals thus treated, a remarkable decrease in the epinephrin content of the suprarenal glands is observed. The arsphenamin anaphylactoid seems to be a set of symptoms which are produced when a sudden decrease of the epinephrin content of the circulating blood occurs when it cannot be resupplied by the epinephrin system in sufficient quantity or promptly enough. It is significant that arsphenamin and neoarsphenamin each arrest the epinephrin-mercuric chlorid reaction in the test tube.

The Spirochetes of Relapsing Fever in Manchuria.—Toyota comments on the differences between different strains of spirochetes found in patients and the differences observed in those cultivated from mice and through generations of mice. Even in the single epidemic, strains are encountered which differ widely in various characteristics and immunity reactions. At the same time, after repeated passages through animals they seem to veer to a more uniform type. The article is in German.

Experimental Mixed Infection with the Influenza Bacillus.—Yanagisawa reiterates that the causative agent of the present pandemic of influenza has been recognized as Pfeiffer's influenza bacillus by the workers at the Kitasato Institute. The possibility of an invisible virus seems to have been disproved by the invariably negative results of Kusama's experiments on healthy persons with diluted and filtered sputum. Yanagisawa's experimental research apparently demonstrates that in the pandemic the influenza bacillus first enters the respiratory system and develops the typical symptoms of the disease if no cocci are present. If, on the other hand, it enters into symbiotic relations with cocci, it intensifies the toxic action of the latter and the secondary symptoms from them overshadow those from the influenza bacilli, and the latter may actually be crowded out.

Mitteilungen a. d. med. Fakultät. d. k. Univ. Tokyo

Dec. 28, 1917, **18**, No. 4. Rec'd June 1, 1919

*Comparative Microscopic Anatomy of Vertebrates. II. G. Osawa.—p. 443.

Comparative Microscopic Anatomy of Vertebrates.—The vertebrates studied were on the order of urodela and gymnophiona, and the microscopic findings in the digestive tract of these amphibians are reproduced in fifteen large plates.

Nederlandsch Tijdschrift v. Geneesk. Amsterdam

March 22, 1919, **1**, No. 12

Style in Medical Writings. G. van Rijnberk.—p. 893; A. Kluyver.—p. 895.
*Comparative Anatomy of the Otoliths. F. H. Quix.—p. 902.
*Periodicity in Disease. J. H. F. E. van Hunsel.—p 913
Serodiagnosis of Typhus. P. H. Kramer.—p. 922.
*Return to Venesection. C. A. Ide.—p. 923.

The Otoliths.—Quix presents evidence to sustain his assertions that geometrical and mathematical analysis of the pressure exerted and experienced by the otoliths opens up a new field for research on the sense of equilibration. The disturbances in man and animals after removal of one or both labyrinths are also instructive in this line. With congenital caput obstipum the head is held in exactly the same way as a rabbit holds its head after removal of the labyrinth on one side. If this finding should be confirmed in other cases, it would suggest as the cause of caput obstipum that the muscular contraction is a reflex phenomenon from the otolith sacculus of the otherwise normal sense of equilibration.

Periodicity in Certain Infectious Diseases.—Van Hunsel calls attention to the periodicity in the appearance of the skin lesions in his experimental tuberculosis. The skin lesions appeared and reappeared in seven day cycles or multiples of seven. The death of two of the animals occurred on the eighty-fourth and the hundred and seventy-fifth day, both multiples of seven. Certain physiologic processes, menstruation and rut return in cycles of multiples of seven. Typhoid usually runs its course in seven-day periods, but a one or two-weeks course is exceptionally marked in scarlet fever, as a rule. The tardy effects of gassing also usually appear after one or two weeks. The records of eruptive diseases display also this one or two weeks' course, the first outbreak of the eruption frequently falling on the fourteenth day after infection. These and other facts cited seem to show the action of certain powerful forces, all working in the same direction, and taking for this, certain regular periods of time. This uniformity seems to exclude the action of the widely diverse antigens as responsible for it. It is much more plausible to assume that the human or animal organism impresses its influence on the foreign invaders and thus determines the periodicity of the phenomena observed.

Rehabilitation of Venesection.—Ide remarks that over 50 per cent. of his influenza patients had more or less epistaxis, and he accepts this as one of Nature's most important means to combat the infectious process. If this premise is accepted, then it is a question whether venesection should not be regarded as an important adjuvant in acute infections.

Hygiea, Stockholm

April 15, 1919, **81**, No. 7

*Tremor during General Anesthesia. T. Rietz.—p. 330.

Tremor During General Anesthesia.—Rietz noticed in 28 cases the development of a tremor during general anesthesia which resembled in character and course the rhythmic phenomena observed at times with irritation of motor tracts. His study of its mechanism revealed a means to control it, namely, by shutting off partially from the brain the blood laden with the anesthetic. This he accomplished by pressure on the carotid artery. The tremor ceased at once in 16 of the 25 cases in which this was done and it became much reduced in 4 others, but no effect was apparent in the 5 others.

Upsala Läkareförenings Förhandlingar

Jan. 20, 1919, **24**, Nos. 1-2

*Poisonous Mushrooms. C. T. Mörner.—p. 1.
*The Lymph Glands. T. J. Hellman.—p. 57.
Views of Elderly Physicians on the Medical Career. R. Friberger.—p. 137.
*Invagination of Colon in an Adult. G. Nyström.—p. 151.

Poisonous Mushrooms.—Mörner relates that for twenty years he has been collecting data for this study of poisonous mushrooms, compiling articles on this subject by physicians, chemists, botanists, pharmacologists, hygienists and statisticians. The clinical side of mushroom poisoning seems to be thoroughly known but the chemical and pharmacodynamic side has still many gaps in our knowledge, notwithstanding the extensive literature. Possibly the problems involved are technically exceptionally difficult of solution. He gives eight pages of references, with the titles in full, and five colored plates showing various species of mushrooms at different periods of growth.

The Lymph Glands.—Hellman reports extensive microscopic research on the lymph glands as a protecting organ in general and as protecting against cancer, tuberculosis and anthracosis in particular. Among the points thus learned is that cancer cells and tubercle bacilli seem to arouse a biologic reaction in the lymph gland as they reach its surface, and this reaction impedes their further penetration into the gland. Particles of coal do not rouse this reactive process and consequently they work deeper and deeper into the gland and are found even in the center, while cancer cells and tubercle bacilli are found in the periphery, and the cancer metastases develop in the marginal sinus. Three plates reproduce the microscopic and macroscopic findings in several cases, presented by Born's "reconstruction method." Six pages of bibliography on the early involvement of the lymph glands in cancer and tuberculosis are appended, with a brief summary in German.

Invagination in Adult.—Nyström's patient was a man of 38 and the invagination involved the transverse colon. It was corrected by a laparotomy, with recovery. The pains in this case were not of the colic type and they were located in the lower bowel so that they suggested bladder disease, especially as there was complete retention of urine the second day and the man vomited, but the vomit was not fecaloid even up to the fourth day. There was a tendency to diarrhea and the second night the stools showed fresh blood. At the laparotomy the fourth day, the invagination was reduced and the greater omentum was brought down over the excessively long transverse colon, to prevent further invagination, and was held with fine catgut stitches.

JOURNALS ABSTRACTED IN THE CURRENT MEDICAL LITERATURE DEPARTMENT, JANUARY-JUNE, 1919

The following journals have been abstracted in the Current Literature Department of THE JOURNAL during the past six months. Any of the foreign journals, except those starred, will be lent by THE JOURNAL to subscribers in the United States and to Fellows of the American Medical Association for a period not exceeding three days. Only one journal may be borrowed at a time. Requests for periodicals should be addressed to the Library of the American Medical Association and six cents in stamps should be enclosed. This covers the average expense of mailing a journal. Domestic journals can be obtained by sending the approximate amount direct to the respective publishers. Thus most of the journals indexed are accessible to the general practitioner, no matter where he may be located.

Acta Scholae medicinalis universitatis imperialis in Kioto. Irregular. 1.50 yen. Kioto.
Amazonas medico. Q. Manaos.
American Journal of Anatomy. Bi-m. $7.50. 36th St. and Woodland Ave., Philadelphia.
American Journal of Diseases of Children. M. $4. American Medical Association, 535 N. Dearborn St., Chicago.
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